# PROGRESS AND CATASTROPHE

## AN ANATOMY OF HUMAN ADVENTURE

BY

STANLEY CASSON

*Fellow of New College, Oxford*

HARPER & BROTHERS PUBLISHERS
NEW YORK AND LONDON
1937

CONTENTS

PART III

OUR COMPLACENT WORLD

## PREFACE

IN THIS small book I have attempted a single task—to search through the records of civilisation for those elements which lead to what is usually called Progress, and also for those elements which lead to the opposite movement, Retrogression. Such elements are more easily perceived in the earlier stages of the development of mankind, so that my material lies in the main part in the field where the archæologist is the best observer. The two great triumphs of Retrogression occurred, one in an age before the universal recording of history, the other when, by good fortune, fairly full records are available. I have, therefore, used the evidence available in each case, archaeological in the former, literary and archæological in the latter.

I have tried faithfully to let the evidence tell its own story, and have commenced my analysis without any prepossessions. I do not believe that human history follows any pattern or shape, or that there are any known causes of rise or fall which are followed by predictable effects. Historical analogies are usually foolish and always dangerous and I have striven to avoid them.

But a study of the evidence reveals tendencies which follow more or less along well-defined grooves. To-day it seems of profound importance to study these tendencies and to see whether those which we can observe operative in the past are also operative in the present. If we conclude that contemporary conditions suggest the reappearance of retrogressive forces we can at least try to arrest them and reverse the direction of disruptive tendencies. To that extent this book is a study in applied optimism rather than an admission of defeat.

Much that I have written is controversial. Many of my archæological conclusions and critical comments are open to dispute. Many of my facts can be countered by other facts. But I hope that out of the general mass of evidence I have collected, it is at least possible for the reader to discern the main elements of human advance and human retirement. Any general history of civilisation will give the material for a study such as this, but it seems to me that those who have written world histories have too often forgotten the earlier stages of man's development and stressed too much those periods which are most fully documented. In so doing they fail all too often to discover those tendencies which it is the purpose of this book to emphasise.

No scientific study can be of use to humanism un-

less it has an application to contemporary life. I have attempted to make such application from the study of archaeology, by producing examples which seem to have a value at the present day. I can only apologise for making a book which is little more than a series of conclusions about human history which deserve, more to-day than perhaps at any other time, the contemplation of the incurable optimist and the respect of the confirmed pessimist. I am myself neither the one nor the other.

*Part I*

# *THE FOUNDATIONS OF CIVILISATION*

## CHAPTER I

## THE NATURE OF PROGRESS

'The same path leads up the hill and down.'
—HERACLEITOS.

---

THE term Progress, with a capital P, is a relatively new invention. It implies, not merely movement onwards from one point to another, which is the meaning usually given to it in ordinary usage, but a movement in the course of which something is picked up *en route* which transforms the progress into a triumphal procession. 'Do you believe in progress?' is a question which for a century has been asked only in derision, the possibility of a genuinely intended negative being disregarded.

The general idea of progress, which implied that it was a process wholly differing from mere progression, and one in which the future of the human race was deeply implicated, seems to have been a by-product of nineteenth-century thought. It was derived from the extremely popular expositions of evolution made by Darwin and Huxley. It was assumed that, because man

has evolved from a lowly simian origin, moving ever forwards, picking up by the wayside a jewel of morality here or a gem of ratiocination there, he must of necessity go on collecting unnoticed treasures of heart and mind. It never occurred to those who blithely swallowed these assumptions that, once man was conscious of his origin and the method of his development, he might, by that very conscious knowledge, become so *self-conscious that the progress might stop: just as chil*dren innocently behaving with decorum, break the spell once their parents have congratulated them on their good behaviour. For man to be told of the mechanism of his upbringing was an immediate temptation to him to throw rocks into the cog-wheels. As I observe the world to-day, this seems to me to be what he has done with deliberation and not a little gusto.

Progress made greater strides when men talked less about it. The ancient Greeks had no word at all by which we can translate the term.* 'Do you believe in progress?' would to them have been a question wholly devoid of sense. Change and movement onwards they

* Professor Zimmern in *The Greek Commonwealth*, p. 181 (note), says, with unconscious cynicism, that they had no word for progress 'because the words they used (*e.g.* μετέβαλον, μετέμαθον) were not so misleading'. The Greek words he quotes mean simply enough, 'underwent a change' and 'unlearned'.

knew only too well, for they initiated more changes in human life than any other people in history. They knew that with change could come improvement and amelioration; but they also knew that such improvement could be achieved only by immense human experiment and labour; there was no immutable force which willed that mankind should always move onwards, improving inevitably as the accumulated wisdom of one generation was added to that of the next.[1] And yet to-day that is what the ordinary person thinks is happening. He seems to believe that there is something inherent in man, something which generates this strange metabolism of good from evil. The Greeks knew that it was only by the untiring efforts of one generation that the sins of the preceding generation could be wiped out, and then, even so, you had no more than a fair start towards something better. It was not enough merely to set your ship in the current and delude yourself that the engine was doing the work.

That progress does in fact occur on occasions nobody except a fool would deny. That it is cumulative and inevitable no one but an idiot would accept. What we have to find out is whether the advance of one period is ever really indebted to the progressive dis-

coveries of that which preceded it, whether we advance only to retire, or advance five steps to slide back only three. Even if progress amounts to this much, it is a treasure beyond price.

If progress is to achieve anything at all beyond a mere unlearning of the lessons of the past and beginning again, the word must imply the addition of some element which includes *amelioration*. It must be a snow-ball movement by which little is lost and something always added.

I propose to examine, from the strictly limited point of view of the archaeologist, those movements of human activity in the past which may contain the secrets of this mysterious process of advancement which we call Progress. For the archæologist alone has the vaster fields of man's records under his eyes. The student of recorded history can cover so short and so pitiful a space of time. In the written pages which the historian uses as sources everything is clear, but what are the two and a half thousand years of his records compared with the hundreds of thousands of years which the pre-historian can illuminate with his evidence. You may say that the material objects left by man will give no indication of the spiritual advancement of mankind. But no upward movement of spir-

itual advance was ever made without its material setting. Your Gothic churches, your Parthenon, your caves of Mithras, Temples of Solomon, are all the solid frames of spiritual inventions. They are testimony enough. So too the beads and bones and graves of man in the dawn of time will tell us all we need to know.

## CHAPTER II

## THE EARLIEST INVENTIONS

FOR us, man is not man until he has learned to use his hands in such a way as to give him superiority over beasts. His physique and the circumstances of his gestation and childhood make him the most vulnerable of all animals, so that he has to turn to other weapons than mere force. Probably the first great discovery made by man, that gave him mastery over the savage world of organic and inorganic nature, was fire.[2] In Prometheus that great moment was remembered. Probably—and all is probability—man started on this first step of progress by thinking of ways and means to make some kind of instrument with which to do things that animals could not do. He perhaps bent branches into roofs against the rain, and then broke branches into instruments with which to hunt and kill game and dig for roots. Then, by his first stroke of intelligent genius, he learned how to adapt stone to his purposes. Immediately there was an advance. Instead of perishable and breakable wood he had unbending stone with

which to delve into the ground or to crack the bones of wild beasts or to split tree trunks.

The first implement of flint was made far away in the dim past. So vast a space of time has passed since wandering hunters first picked up stray flints and knocked them together to improve a shape already half provided by nature, that we cannot safely compute it. The only way to indicate the antiquity of this occurrence is to realise that, in England, where the sequence of events can be traced as well as anywhere else, these prototypes of the more finished implements of later times, which are known as Eoliths—'Stones of the Dawn'—were made by men before the red cliffs of eastern England were deposited by some forgotten sea. For us, with our brief two thousand years of history, it is almost impossible to grasp the implications of this distant England whose shape was totally different from that of the island we now inhabit. We can but look down the long obscure corridors of time and see, far away at the end, a small glimmering light—light made by the first man who fashioned the first flint into an instrument. For as he struck flint against flint, sparks flew and he discovered fire, a power which he had previously known only as lightning or as forest fire.

Primitive man had always feared fire, but in the back of his curious and inquiring mind he knew that fire controlled would make him king for all time. Had he not passed in the track of the forest fire and seen the scorched carcass of deer or hare or wild oxen, beasts that ran without thought and so could not know how to escape the dangers of nature? Had he not eaten of this scorched carcass and found that fire made it good to the palate? And so, with one stroke of his inventive mind, he found fire, and the first of all the tools of scientific man. *Homo sapiens* had become *homo faber*; from merely intelligent man he was become man the Manufacturer. That was the first great moment of progress in the history of the world, a moment comparable to which all subsequent developments are mere elaborations and improvements on a basic theme.

It is so difficult as to be almost impossible for us now to recreate the psychology of that ancient man who first made those utterly primitive instruments and first made use of that most valuable power in the world—fire. You must first imagine yourself propertyless, always hungry, and in fear, but always buoyed up with the knowledge that by the aid of your mind, by which you know you are superior even to the fox,

you can contrive something which will alleviate your position, something with which to find food more quickly, something which will enable you to kill your prey and break up its body for eating. You think slowly and long. Probably several hundred years of thinking was done by endless generations of men, once the bare idea of making an artefact had begun to glimmer in their minds. Then one day a stray man saw a broken pebble that seemed to him almost suitable for the task. But it was not quite suitable, and so he gave the pebble half a dozen blows, and then suddenly it took the form desired, and he had made the first instrument ever designed by man. To-day we use the word 'instrument' in ways more recondite. Lawyers speak of parchment deeds as instruments. Politicians will call the Treaty of Versailles an instrument. And so they are. But no instrument was ever the medium of such power and of such discovery as that first eolith from the dim uncharted past.

But man is intensely conservative. Just as his every legal deed and treaty is couched in the same dry phraseology, so his earliest instruments are all stereotyped to a degree. The first eolith was made in one or two shapes only. Those shapes persisted for many thousands of years. The first mighty leap had been made,

and an immense age of caution ensued. Men had got all they wanted for the moment—a microscopic ration of comfort and ease, no doubt, but to them the sovereignty of the world. They were no longer just another kind of wild animal. They were men who could do countless things that animals could not. They could warm themselves before fires, carve wood, scrape skins, make clothes, boil water in shells, and roast meat in stone ovens. They thought of themselves in comparison with their fireless, flintless ancestors as we do of them, though the gap between their condition and that of their ancestors was immeasurably greater than that between them and us. And so they stayed where they were, cautiously cogitating their next step. Profoundly race-conscious, like the animals, they turned all their inventions and their thoughts towards the preservation of their kind from extinction. It is from this time that I would date the beginnings of almost all the moral consciousness of mankind. For in the devising of measures to ensure continuance lies every moral judgment ever made. Perhaps some of these moral ideas go back to the age of animals. There are clear signs of moral behaviour in the beasts, when they act collectively. This conclusion was reached more than thirty years ago, in a brilliant book by

Prince Kropotkin, who examined the question in the fullest detail with the eye of a scientist and a philosopher. His conclusions are these. Implicit in the principles of evolution, but only partly explicit in Darwin's first exposition of them, was the proposition that besides the Law of Mutual Struggle there is in nature a Law of Mutual Aid; that *within a species* there is universally evident a deeply ingrained tendency to cohere and assist in order to oppose the onset of natural dangers or the attacks of other species. Thomas Huxley and Herbert Spencer, true to the character of nineteenth-century individualism, emphasised the former law and minimised, or even omitted consideration of the latter. As often happens to revolutionary theories, Darwinism, as developed by others, lost some of its essential elements. Kropotkin set out to investigate the proposition of Mutual Aid through a series of long and patient researches as a naturalist in Siberia and Transbaikaila. His book, *Mutual Aid: A Factor in Evolution,* set forth his conclusions in detail and has never since been seriously refuted or criticised. He points out how the collective action of animals in the face of danger, starvation, excess of population, and other risks of continuity of the species, leads to the adaptation of behaviour to suit the circumstances. Elementary or-

ganisation against attack by other animals coupled with mass action in defence; deliberate change of diet when accustomed food supplies fail; division of the group into sections which disperse when over-population threatens extinction through lack of adequate supplies—all such adaptations of behaviour occur and make for survival. The fact that to-day we are now crying for 'Collective security' to avert war and the break-up by mutual strife of the human species is a tragic marginal note on the work of this great scientist, who, were he alive, could rightly say that nearly twenty years before the League of Nations was founded he had shown us that the conception, if it be understood in time, is an essential part of survival.

Darwin had pointed out, said Kropotkin, how 'In numberless animal societies, the struggle between separate individuals for the means of existence disappeared, how struggle is replaced by co-operation, and how the substitution results in the development of intellectual and moral faculties which secure to the species the best conditions for survival. He intimated that in such cases the fittest are not the physically strongest, nor the cunningest, but those who learn to combine so as mutually to support each other, strong and weak alike, for the welfare of the community.

"Those communities," he wrote (*Origin of Species*, second edition, p. 163), "which included the greatest number of the most sympathetic members would flourish best and rear the greatest number of offspring." '

From this inherent process of evolution originated the moral conceptions of mankind. Kropotkin showed how beavers, when their band has become too large for subsistence, will divide the band into two parts, the older members swimming away in one direction, the younger in another; how relatively defenceless animals, when attacked, will by sheer weight of numbers repel the attacker and even save their wounded. Here is the first appearance of the moral sentiments of courage and compassion, which are a necessary outcome of social life. 'Compassion means a considerable advance in general intelligence and sensibility,' says Kropotkin. 'It is the first step towards the development of higher moral sentiments. It is in its turn a powerful factor of further evolution.' Even a rudimentary kind of justice is present among animals. Some migratory birds always return to their individual nests, which are, in a sense, their private property. As Kropotkin says, 'It is evident that life in societies would be utterly impossible without a corresponding development of social feelings, and especially of a cer-

tain collective sense of justice growing to become a habit . . . and feelings of justice develop more or less with all gregarious animals.' He goes on to quote various instances of animals which not only respect but force the respect of others for the individual choice of home and habit. Penguins arrange their areas for nesting and fishing by agreement and do not fight for them. Certain small birds and rodents live in organised settlements. These protective arrangements, this rudimentary collective security, achieved so early by animals, so soon forgotten by man, lead even to a kind of conscious building for defence that actually takes on a semblance of architecture or engineering. A case of defensive construction by moose was recently recorded in *Antiquity* (March, 1936, p. 103):

> Moose in winter time often make what are known as 'yards'. They travel to and fro trampling down the snow, and, all round, the soft untrodden snow forms a kind of rampart. Here they can remain safe from the wolves, which are their chief enemies. When the snow is soft, the moose is more than a match for the wolf, but if the wolf can run on hard snow a band will bring down even a powerful bull.

A moral outlook, a sense of primitive justice, hard to distinguish perhaps from mere habit, but in effect justice; a capacity for taking practical measures to

make collective action more effective by a form of primitive engineering;—here you will find that the animals have already suggested lines of development which man with his quick intellect could immediately grasp and utilise for the advancement of his species to a position of superiority above all others. Here, in brief, was the setting from which man emerged. Isolation meant death to all animals. The immense prehistoric monsters of the past were exterminated in detail because they were too cumbersome and too stupid to act in mass. To destroy a species you have to detach its members from the herd. Against that all surviving species have always reacted by moving as a herd to collect the straggler and prevent the deliberate isolation of individuals by external enemies.

Scientists do not pretend to unanimity of opinion as to the particular branch of the anthropoids from which man developed. But Darwin himself was certain that man could not have developed from apes who lived an isolated existence. He was inclined to think that the true ancestor was a type of ape belonging to some species which had social qualities and powers of association, even though the individual was himself relatively weak. The gorilla is immensely powerful, but lives only in small groups and families. He is gen-

erally regarded as an unsuitable candidate for the ancestry of man. The stronger candidate, the chimpanzee, on the other hand, is sociable in the extreme.

What was the social condition of those prehistoric men at the dawn of time who manufactured the earliest implements we cannot tell, even with moderate certainty. The number of their implements which have been found, and their distribution, suggests that they lived in large groups. But this assumption is based on insecure evidence, for the number of implements found may be due to the immense period of time during which man remained at this first stage of civilisation. Nor have we as yet very full evidence to show how widely the earliest type of man was distributed over the face of the earth. The earliest implements of all have only been found in a few places. But this is largely due to the fact that the plateaux and river banks on which they lived have been eroded almost completely away by geological change. These prehistoric men and their instruments have been swept into the limbo of time, and their traces are found only on a few hilltops, which are all that is left of an earlier level of the land. So there is at least a chance that men once peopled these lost uplands in larger numbers than we suppose.

Thus we get a glimpse of man at this initial stage of his progress, but that glimpse shows him at the vital moment when he first became a maker of things, so acquiring immense power over the world in which he lived, and acquiring at the same time those qualities of mind and hand which lifted him straight out of the merely animal level at which he had previously lived. From his animal existence he had brought with him the rudiments of a social mode of life which he was soon to perfect and the elements of moral consciousness that went with it. His task ahead was to cultivate these social and moral qualities at the same pace as his practical inventions. When the former developed too fast his whole social fabric would be in danger of destruction, if he did not also take practical measures to defend what he had created against external attack by beast or natural forces. When his practical inventiveness ran ahead of his moral consciousness and social organisation, then man has equally faced destruction. Perhaps to-day we are in this stage; our analysis will show later. The perfect equipoise of the two forces is evidence for a truly civilised state; but it has been attained at only a few periods in the history of the world.

## CHAPTER III

## DEVELOPMENT OF THE INVENTIVE FACULTY

GREAT occasions are rare enough in the history of man's development, but the making of the first instrument was one of the greatest of all. Implicit in that discovery was man's first faint consciousness that he could command the forces of nature that surrounded him. Every subsequent discovery has been a refinement of this first triumph. Nor was stone the only medium he used for his experimentation. Bone provided an even easier medium for manufacture, and bone implements seem also to have been used at this primitive stage in history.

We learn of man's beginnings only from occasional discoveries in limited areas. Yet from them—from a few pits and cliffs in England and Western Europe—we can generalise with some safety about the whole development of mankind in the Old World. All of Western Europe seems to have followed the same general course, even if our knowledge is acquired by the chances and hazards of archaeological discovery. The

New World falls outside our story, for the great ice-sheets that covered almost the whole of North America shut off communication with Asia by way of the now accessible Behring Straits. There is as yet no certain evidence that man existed at all in America in Palaeolithic times, in the Pliocene and Pleistocene eras.[3] If he did, then he developed independently from man in the Eastern hemisphere, and we must presuppose two separate examples of evolution in two separate places. At present few would admit that the ancestry of man in America can be traced back beyond relatively recent times. It was a continent literally uninhabited at the time when early man was roaming the valleys and downlands of Western Europe, Africa, and Southern Asia.

At present prehistorians are uncertain whether these first men who made instruments are the ancestors in time of those who made the next type of instruments, the Palaeolithic axe. There may be a geological break beween the two periods of development, or there may not.[4] But our facts are plain enough. At a date still so remote that we can calculate it only in units of a thousand years man suddenly made a stride in skill and knowledge. He produced stone implements so clearly planned and designed as to

render ridiculous any doubt concerning their human manufacture. These are the splendid and massive stone 'axes' as they are called, which are found in hundreds, buried deep in the gravel which forms the terraces of rivers in England and France. There is a latitudinal line north of which they are never found at all: it runs through the heart of England, through the Midlands, and more or less east and west across Europe to near the Black Sea. That is the line of the old ice-sheet which in those days still made a polar region within close reach of what are now temperate and often semi-tropical lands.

Searching for the traces of our Palaeolithic ancestors can be as exciting a sport as any I know in England. If you set out on the chase, you will see how and why these Palaeolithic men grew and prospered. In the process of finding his axes, you will find out an enormous amount about the man himself and his way of life, and so see how the primitive maker of instruments had suddenly blossomed out into a creature whose interests were numerous, whose way of life was simple and comprehensible, and whose ingenuity was astonishing. Make your expedition with me and see what you discover.

We will look for some fine and broad English river

valley—the Thames, the Ouse, or even some smaller valley, almost insignificant. Supposing we go to Southampton, strike North-West, and pass up the valley of the quiet Avon that flows down from Salisbury to Christchurch and the sea. Its lower reaches are clearly an ancient delta, wide and flat, with the stream now in a single groove, and the ancient banks of the delta now visible as low cliffs, three or four miles apart. We will climb the cliffs on one side of the delta and find that we stand about 100 feet above the river near Christchurch. As we proceed up-stream the opposite cliff line closes in until the cliffs are a bare mile apart. From our ridge we look across a shallow chasm of meadows and villages, and in the middle, taking a snaky and twisted course, is the bright light of the waters of the Avon. That is now all that is left of what was once a mighty stream which flowed from cliff to cliff, its two banks the two cliffs, the water lapping at our feet as we stand here on the scarp-edge.

Lower down below this 100 foot level is a lower terrace that rises only a few feet above the present river. This too was once a river-bank along which the water flowed, and, as it flowed, it washed up on the shore the oddments that came down when the river was in spate or flood. To-day the river laps at its low-

est bank, and along that bank now accumulate the oddments of men now living, dropped and forgotten, or washed down from the higher levels from the down-lands near Salisbury, through which the river pushes its way. Ages hence the river will have carved a bed

FIG. 1.—SECTION OF RIVER-VALLEY, SHOWING TERRACES.

*a*. Present river.
*b*, *b'*, *b''*. Brick-earth on different levels
*c*. Low-level gravels.
*a*. Recent alluvium.
and of different ages.
*d*. High-level gravels.

still lower down, and the oddments of to-day will be found buried in the terrace of gravel high above that channel of the future.

We started our walk on the highest and oldest terrace of all, the terrace that is to-day the scarp-edge of the New Forest. Below us is the river and the flat meadows, and across the valley just such another scarp as that on which we stand. Soon we shall come to a gravel pit where a gravelman is digging. If you ask him if he ever finds the flint implements of prehistoric men he will tell you that every few days as he digs one or more turn up. Almost certainly he will take one from his pocket—for all these gravelmen know these

implements and what they are, and even if no one had told them they would still know by means of their own unerring instinct. For they dig gravel year in year out all their lives, and when from the loose stones, there falls an unusual stone that is man-fashioned, they identify it at once by its outward look and shape. It is neither a water-rolled pebble nor the clumsy oddly-shaped flint of nature. The unerring eye of the gravel-digger sees it at once, just as the diamond-digger sees his rough stone in the blue diamond 'rock'. These flints are worth a shilling or so to the digger, so he keeps them to sell to you or me, or the nearest museum. He will tell you that he finds them not only in the top level, just below the soil, the very latest bank of the river in those distant days when it flowed as a vast stream between the cliff across the valley and the cliff on which we stand; but he also finds them as deep as twelve or fourteen feet down right to the natural clay on which the gravel lies. All these fourteen feet or so of gravel were laid down by the endless running of that wide river. You can try to guess the time it took for the waters to deposit fourteen feet of compact iron-red gravel, but you can only conclude that it was an immense time. Yet if you look at the implements the gravel-digger finds, you will discover

that those uncovered at the uppermost level differ in no degree at all from those found at the lowest level. That is to say, the maker of these implements had set a fashion with which he was satisfied. Geologists and archaeologists estimate this long period at some forty thousand years. How envious it makes us to think that once, long ago, man lived content with what he had made for an age eight times longer than all the recorded history of mankind.

These first effective instruments are not mere natural stones hacked or chipped here or there to make them more suitable than they were by nature. The earlier instrument, the eolith, was made during an even vaster space of time than that during which the more finished implements were made. Man was then content with his handiwork for an even longer period. A period of one hundred and eighty thousand years has been suggested as the length of time it took for man to change his first fashion of roughly-chipped eoliths, and invent the new type of implement which we find on our high terrace above the Avon. The maker of eoliths lived in a land whose geography we should not recognize in the least. But the maker of these first palaeolithic axes lived in an England which we could just recognize. The Eolithic man inhabited a

Europe which was joined to Africa by land-bridges at Gibraltar and Sicily, and it was over those bridges that man, generated perhaps in Africa, probably came into Europe from the south. But the man of this new age of invention inhabited a Europe which differed mainly in its surface contours from the Europe that we know. And the fashion he started of a new implement was almost as big a stride forward from the first type of implement, as that was from the stage when man had no implements at all. Actually the making of the first stone implement, the eolith, was the greatest *psychological* advance in the history of man at any age. The Palaeolithic axe was a vast *technical* advance in that it had a specific and fixed *shape*. That meant that in the mind of man the first *general idea* had taken shape.

It is common knowledge that man in primitive conditions rarely achieves general concepts. His language is what philologists call agglutinative; that is to say, he has an enormous vocabulary and hardly any syntax. He thinks in isolated spurts of thought, living mentally from hand to mouth, as it were. American Indians are said to have perhaps a hundred different words for 'water'. There are different words for river water, for rain, for dew, for water-in-a-pot, for water-

in-a-lake, and so on. He has not yet reached the stage of thinking in general terms of water as an element which appears in all these different forms. So, while the beginning of a general idea was clearly in the mind of the maker of eoliths, for he made them always in the same way, yet those eoliths did not have the true shape which the later Palaeolithic instruments show. The shape of these latter is comely and simple, and never varies by a hair's breadth in plan. While the language these men spoke was probably even more rudimentary than that of any American Indian, yet their hands and the mind that guided them had at least reached a true general idea of a certain shape. There were actually two main shapes in use, one an ovoid, the other a pear-shaped instrument. Neither can truly be described as an axe. Each was made for holding in the hand, to use as scrapers of skins, as hammers for breaking bones, as knives for wood and meat, perhaps on occasions as missiles. Take one up in your hands from our gravel pit and hold it, and you will find that it fits naturally into your right hand, with a place for thumb and forefingers and a smooth butt to rest against the ball of your hand. It is the first perfected instrument of all work.

Somewhere in that remote and almost legendary

past someone, or some group of men, first designed it. Once the design was realised as good and useful, the knowledge of it spread throughout the whole world of men, from South Africa to South England, from Asia to the confines of Western Continental Europe. Where it began we do not know, but it is evidence for the solidarity of mankind and the universality of his invention that it was at once adopted throughout the world. One would like to say that the discovery spread 'like fire'. But when we envisage the time during which it was in use, the many thousand years it took to lay down our gravel beds, we can see that there was time enough to spare. Men probably moved in groups and roamed the world looking for new hunting ground and warmer places, following rivers and open country, along ridges and round lake-shores and sea-coasts. They certainly lived in fairly large groups, for the number of these implements discovered is very great. In our gravel pit in the terrace above the Avon if two or three a week are found by one man in an area ten yards square by one yard deep (and this is the rate at which they are actually discovered in these terraces) and if this pace is maintained at all levels, as it seems to be, then we get some vague idea of the continuity of habitation and the steadiness of population along

this ancient river bank. For the implements reached the place where they are found in exactly the same way as that in which beer bottles and broken crockery become firmly lodged in the banks of the present-day Avon. They are left lying about near the river or dropped along its shore. The river rises in spring flood and washes them along until they are buried in mud and gravel, and so are incorporated in its newly growing bank. Sometimes the river rises in abnormal spate and washes away some small cottage or the outhouse of a farm. Then human artifacts of many kinds and types are added to the river's new deposit. So it was in those Palaeolithic days: a camp on a river bank was suddenly overwhelmed by a flood, and all the implements already made or in process of being made by the campers, were washed away. Sometimes actual traces of such a camp are found in the river drift that is now our gravel pit, and we find implements that are quite fresh, perhaps only partly finished. But most of them have been washed along in the usual way, rolling with the river stones perhaps for many miles. These you will find polished to some extent, their edges blunted by contact with the moving river sand and stones. Some I have found which had obviously lain firmly wedged for many a year in some quiet part

of the river bed. One face, the uppermost, would be polished by passing sand, the underside would remain almost as fresh as when it was first chipped.

Although the shapes remained constant, the size varied. You will find, if you are extremely lucky, immense axes perhaps over a foot long. But most of them are about five or six inches in length and two or three in breadth. Only a really ambitious craftsman made the larger. We can see here, vaguely stirring, a kind of artistic pride and rivalry of craftsmen. For the larger axe was not really more useful; indeed, the largest must have been almost too clumsy to use at all. They amount almost to show-pieces, made in the spirit of emulation. And that gives us an unexpected light on this ancient man, of whom we know nothing except what we can read from the things he made.

Now at least we know one thing for certain about man of those times, that he had at last conceived one or two shapes which were almost the equivalent of general ideas, and which spread, by the imparting of fashion as knowledge, throughout the inhabited world. Shapes of instruments, command of fire, there at least are two discoveries, or inventions, for at this stage it is hard to distinguish to which category they are assignable. With them came the germinal moral sentiments

which man had had even when he was a mere anthropoid, the sentiments of compassion and protection, some elements of sacrifice which are inherent in gregarious life, and, perhaps most important and most valuable of all social qualities which make for the growth of a fixed code of morality, the strong virtue of courage. Courage is the first and last of the virtues, the most abused, the most overrated, the most underrated. That Palaeolithic man possessed it is proved by the fact that the prey he hunted was his contemporary, the mammoth, the rhinoceros, the wolf, and many of the fiercest of all animals. Even the predecessor of Palaeolithic man, the maker of eoliths, had courage, for among the implements found with the famous Piltdown skull in the river gravels of Sussex, was a rude club made from a sliver of the leg-bone of a mammoth or elephant of extinct species. His courage gave him the bone, his intelligence carved it.

## CHAPTER IV

## THE APPEARANCE OF ART

WALKING along our river valley by the Avon we can go down the slope to a lower terrace of gravel. Here we still find countless stone implements embedded in the neatly stratified soil. But they show a slightly changed form. Another forty thousand years is allotted to the period during which the new fashion of implement developed. During this long age in which the river ploughed deeper into its channel, the abiding conservatism of man merely allowed him to fashion his implements with greater technical skill; he retained the old shape, changing little, only adding to his craftsmanship. On the river level, in the black surface earth of the meadows, if we search long and carefully, we shall find new and totally different objects: polished axes which are real axes, exquisitely flaked arrowheads, a host of new shapes and types. Perhaps only ten thousand years separate us from their makers.

But between these new people, the men of the Neolithic Age, and the makers of those latest Palae-

olithic instruments found a little higher up, there had been a long period during which changes of climate forced vast changes in life. But here the evidence of our valley fails us. We must go to the caves in the West of England, in France and in Spain. Two, perhaps four glacial intrusions took place. The ice of the north pressed down into the lands inhabited by the Palaeolithic river-dwellers. An arctic climate replaced one that had been warm and tropical. Men retreated southwards, but the hardiest retired and lived in caves quite near the ice-sheet. Man thus entered upon a new mode of life, a more domestic phase. Perhaps the fact that in Western Europe he was forced to live more in caves than before, led to the first decline in what we may for convenience call 'proto-civilisation'. The groups in which man had lived along the wide valleys of majestic rivers must have been split up by cave life. Possibly, though there is not even a particle of certainty, and it is on the whole unlikely, family life first developed in this age of cave dwellers. Other things developed too, for you cannot live in dark and deep caves during long winter nights without turning your thoughts to new things. Once man has safeguarded his daily life and is left some leisure, then his mind turns to new ruminations. And once man starts thinking

without necessarily using his hands at the same time, there is no limit to his inventiveness.

Taking his fire with him into his dark cave he sat and waited for the winter to pass. In his mind there grew perhaps the first traces of religion and magic. These made no contributions of any kind to his comfort or to his intellectual development: they were rather the outgrowth of his fears and his uncertainty. But certainly at this time there emerged also man the Artist. As an artist, man now takes a position as immeasurably greater than that first established when he made his first artefact as was his position then superior to that when he was a mere human, unable to manufacture. Whole civilisations have come into being and passed away without anything beyond a faint hint of artistic skill or aesthetic appreciation. The various Semitic cultures of Palestine and Arabia came and went without producing a single artistic masterpiece. Carthage rose and fell and never created a work of art. Yet Palaeolithic man, driven by a harsh climate into dark caverns, somehow contrived to turn his hand with amazing speed to the making of what are admitted without dispute to be perfect drawings and paintings, and sculpture of no mean value.

It is a common error to assume that Palaeolithic

man became an artist by a miracle, and to suppose that he painted without going through any of the intermediate processes of trial and error, of scratchings and of mere schematic formalism. Actually most of the cave paintings found in the immense caves of France and Spain are the final works of finished artists. We have not as yet found many examples of his earlier fumblings towards art. But we have enough—scratchings on mammoth ivory, daubs and childish scrawls —to show us that Palaeolithic man, like man in every other epoch, did go through an apprenticeship in art. There was no miracle about it, at least not in its germination. We forget that the Palaeolithic cave-man had passed through several thousand years of this apprenticeship. To-day art rises and falls in two or three centuries. Greece passed through all stages from formalism to realism in half a millennium; the Italian Renaissance developed from Byzantinism to Baroque in four centuries. The miracle about Palaeolithic man is that he achieved art at all, not that he achieved it in one jump. He drew without the smallest knowledge of geometry. His mental equipment was not far enough advanced to enable him to classify or to isolate those simple geometric shapes we know so well. He merely used his hunter's eye to enable him to re-

tain vividly in a strong visual memory the figures that he saw in the world round him. His visual memory was developed at the expense of his conceptual power, and of his capacity for formalising and for generalising known objects into fixed and convenient shapes. He looked, memorised particulars, and painted particulars. The mammoth or the bison which he painted was a single and special bison that he had seen, not a bison typified. That is the fundamental difference between him and almost all primitive painters who came after him. He was still agglutinative in his mental processes.

But the fact that he painted at all is astonishing, especially since the many subsequent centuries of Neolithic development produced almost no art at all. The explanation is, I think, to be found in the fact that Palaeolithic man had immense leisure in his caves, the kind of leisure that is never available to agriculturists of a more developed age.[5] His hand was full of cunning, and he wanted bitterly to do something else besides domestic tasks like chipping flints, scraping skins, and making bone instruments. To him for the first time in the history of man, came the amazing idea of doing something that merely gave pleasure. It has often been suggested that he did these paintings at the request of the magicians and medicine men of

the tribe, that they might gain power over the animals portrayed. This may well be, though there is no proof. The important point, however, is not why these paintings were made but the fact that they were made at all. I can imagine a medicine man saying, 'Make me a painting of a bison,' but I can also imagine the artist saying to himself, 'What a lovely bison I have painted.' That is the point. He had painted a lovely bison and he knew it. It is impossible to imagine for a moment that the artist thought of his painting merely as a task done for a medicine man without any merit. For he made not merely paintings but good paintings, and he tried to improve them. He corrected and repainted and strove to make them as fine as he could. Whether the paintings were really made for magical purposes does not matter in the least. They were things which obviously gave pleasure, and were painted by the artist with the definite intention of making them as good as possible. That is to say, Man the Artist had suddenly appeared. His paintings must have inspired admiration as well as satisfaction from the point of view of the medicine man. The painter, and with him the sculptor of small stone and ivory figures and even, in a few places, of reliefs carved in the rock, had forged another link in the long chain of progress. They had

advanced the condition of man to a level that placed him at the beginning of the dawn of civilisation.

The craving for painting and carving probably arose out of man's endless experimentation with the chipping of flints. He had chipped them for so many long centuries, always more or less in the same way. He had made bone and leather utensils drearily for many thousands of years. Then at last he became curious to see if his skilful and adept hands could make something that nobody had asked for, could just employ themselves for pleasure. That was a profound step onwards, born of dark days and long winter nights with nothing to do.

Life in caves seems to have produced other elements of what later developed into important contributions towards progress. The first of all domesticated animals appears in the cave age—our ancient friend and ally the dog. Man lived by collecting his food, not as yet by making it grow, and the dog, an eternal scavenger, profited by his association with man. I imagine, and this is pure guesswork, that wild dogs must have surrounded the abandoned carcass of mammoths or bison killed by man; gradually they came to follow his trail and to gather in the regions where he lived. A litter of puppies captured by man from such neighbours

would soon become friendly and stay in the cave with their master. The dog, with a hint of the intelligence of the fox and the courage and strength of the wolf, was wily enough to see the advantage of the arrangement. It need not have been a long and complicated matter for the dog to become domesticated rapidly into that fidelity which is his abiding characteristic.

'This stone records the name of my most faithful guardian: now the sound of him is heard only in the silent pathways of the night.'

These lines are on a Greek tombstone to a beloved dog. So he has been for all these fifteen thousand years.

At the close of the cave age there appear, too, signs that man had at last begun the process of abstract thinking. The latest cave paintings show that the artist had ceased to paint particular things. What he paints are not actual beasts and men that we can recognise, but harsh little figures that are generalisations. Abbreviated symbols take the place of actual representation. Man had now, for the first time, worked out general terms for objects around him in pictorial form, though it is vastly unlikely that he had also devised generic words in actual speech. He could think now of 'bison' as a type of animal, of 'deer' as another type: hitherto it had been 'this bison' and 'that deer'.

Now he could say to himself, 'There must be bison out there for I have seen their spoor.' And so to the artist there came a symbol for 'bison'. That primitive abstraction was ultimately to lead to writing and printing![6] Once symbols are conceived, man is well ahead on the road of progress.

Wonder has frequently been expressed that these prehistoric artists in so remote an age should have turned their attention to sculpture, which is usually considered as an advanced artistic enterprise. But the explanation is simple. The ancestors of these artists had for thousands of years been accustomed to making objects in three dimensions. They had made stone implements before they had ever thought of drawing in two dimensions. Their ventures in sculpture, which took the form of small carved bone ornaments, diminutive figures of women, horses, and various animals, came to them naturally because they had carved and chipped in the round for so long. Painting on the walls of caves and on stones was in fact an unusual experiment which may well have developed out of carving. In its first stage painting seems to have started from the very simple experiment, examples of which are common enough in the caves, of placing the human hand against the face of a flat wall and daubing round

it in colour, so making a blank silhouette of the hand. This is still done by Australian aborigines and it is also the child's first step in painting. Consequently most of the simpler cave paintings take the form of silhouettes.

## CHAPTER V

## THE HARNESSING OF NATURE

GRADUALLY the ice receded until it finally reached the frontiers which it keeps to-day. The earth resembled the earth we inhabit; the shore lines, rivers, and seas took the forms and positions we know. In this more familiar Old World Palaeolithic man still lived on and still kept his ways. But the opening up of the earth to new adventures soon brought him from his cave. Now begins a period fertile with new elements of progress.

After the Palaeolithic Age, as known to archaeologists, comes a period when the same people lived once more along river banks, by sea shores, and near lakes. Still they gathered their food or hunted it, and for a few thousand years there was no hint of advance. It was a brief interlude of static existence. Much of their skill of the cave days was lost. Many of the animals they had once hunted had retreated north after the ice-sheet and a colder climate more suited to them; others migrated far and wide in an easy world. Man-

kind seemed now, in what the archæologists call the Epipalaeolithic Age, to be able merely to maintain himself and no more. The middens and refuse heaps of the time show that he ate shellfish by seas and rivers and lived a most primitive life. The implements he made were less ambitious in design and inferior in technique. His art seems to have faded out almost completely. While there were no positive elements of retrogression, yet mankind had lost much headway and had devised little that was new to make up for what was lost. There are some hints that the germ of war had made its first appearance. As the mode of life became less efficient it became more savage and it is not surprising that in one or two phases of this culture we meet with signs of increased barbarism. Occasional cannibalism had existed in the Cave Age, and perhaps even a little earlier. There are distinct traces of it. But it was not a universal practice, and may not have amounted to much more than the ceremonial consumption of a dead person of importance. But in the dreary Epipalaeolithic Age cannibalism was probably more frequent, and we find evidence of fighting between different tribes, perhaps between radically different types and races of men. The so-called Capsians, who seem to be most characteristic of this period, were

aggressive and warlike and have left degenerate cave-paintings showing combats between small groups of men armed with bows and arrows.[7] Here was the first positive germ of retrogression. But it did not multiply and spread. It was soon killed off by the new mode of life that arose in the succeeding Neolithic period.

Now comes the first of the innumerable discoveries which led to a swift human advancement. While the invention of implements was perhaps the biggest discovery of man so far, the discovery that plants and animals can be organised to reproduce themselves for man's benefit was a discovery of incalculable value for all subsequent social development. No discovery even remotely comparable to it has since been made. The making of implements and utensils permitted man to segregate himself finally and unequivocally from the animal world. Even so, he was only the master of animals and did not as yet belong to a species whose mode of life was fundamentally different from that of the animals. He still hunted or collected his food, just as did the carnivores or the birds and fishes. He was still largely at the mercy of the elements. He had fire and the work of his hands. But he still depended for food upon conditions strictly subjected to natural limitations and catastrophes. But the discovery that seed can

be sown and later harvested, that fruits and bulbous plants and roots can be made to propagate more than they do by the mere functioning of nature, was a discovery that led to the direct organisation of men to live in groups sufficiently large and sufficiently expert to apply their new knowledge effectively. With the dawn of agriculture came the dawn also of social organisation on a basis of function. Instead of a mere aggregation of men into a group or a tribe there was now growing up a form of conscious association that led to the emergence of specialists. Men who could select the requisite seeds, men who knew how and when and where to plant them, men who knew exactly when the harvest would appear and how it was to be reaped—here was the background of a highly organised human society.[8]

The growing of grain, the basis of all agriculture, was also the very first of the new discoveries. Somewhere someone found a grass seed, which, when ground to powder, made a delectable and nutritious paste. When this seed was deliberately planted it multiplied, and there occurred a deliberate selection of the largest and strongest plants. In this way all the cereals were eventually produced. Wild oats do not differ so profoundly from the other grasses as wheat does from its

prototype. Wheat is thus probably one of the later agricultural inventions. Rye was perhaps the first grain to have been developed from a natural plant. Other animals were now domesticated besides the dog. The dog had been the huntsman's pride. For the agriculturalist he was but a minor servant. The discovery that certain wild oxen could be tamed and made to breed, and that the artificially grown grasses could feed the herd during the winter, was a corollary to the main discovery of the fructification under control of natural plants.[9] Husbandry and agriculture developed together. They marked the signposts that indicated the way to organised human existence. For the clockwork of the seasons set a timetable and a discipline that made detailed organisation essential for the continuance of such a mode of life. Even to-day the farmer lives a more settled and a more scheduled life than any member of the community except perhaps the railwayman! He must do certain specific things at stated intervals, following the occasions of nature and the vagaries of the seasons with a most meticulous care. Otherwise he and his community will starve and perish.

The irresponsibility and leisure of the Cave Age were gone. There was now no longer time for speculation and rumination: no place or demand for artists;

and no more ponderings in the dark winter nights. For the farmer has a duty at all times of day and night throughout all seasons of the year. The agricultural stage of existence corresponds with the archaeological stage of development known as the Neolithic Age. This was a time when man was a realist, out for the intensive propagation of his species and their preservation by means of a series of inventions and discoveries of unusual ingenuity. The Neolithic Age was the first period of prehistory when the human species began to increase beyond all bounds of expectation. The hazards of life were decreased for the first time and an organised life made the generation and preservation of the species a less urgent and less difficult matter. At last man had ensured his food supply, and was capable of forming into groups through which that deep and powerful instinct for mutual aid and mutual protection was able at last to fulfil itself on the grand scale.

The discovery of agriculture, once made, spread round the inhabited world, as rapidly as once had spread that strange invention, the first implement of stone. The very nature of the new discovery aided its spread. For the earliest tillers of the soil had at first no knowledge of how to use the same field over and

over again, no inkling of the rotation of crops. So, as one area was worked out, the community moved on to another. Early agriculture was semi-nomadic and, as it moved, the knowledge of its methods was communicated. Agriculture implied the invention, as it improved, of new implements and fresh tools. Most of all was needed an instrument with which to turn the soil. So the ingenuity of man rapidly devised it. Among the earliest known Neolithic instruments that have been found is a smooth polished stone with a blade edge, flat on one side and curved on the other. This is the adze-hoe, an ideal instrument for turning hard soil. It was fastened on to a wooden handle by means of leather thongs. In the earliest Neolithic villages this is the only implement of polished stone that is found. Polishing stone was itself a minor invention of some importance; but it was always an alternative to chipped stone and never superseded chipping.

A second instrument that soon became common was the arrowhead, exquisitely flaked and shaped. Many experts argue that arrowheads imply knowledge of war. There is no certain proof of it at this period, and until proof is forthcoming we can only assume that these instruments were for use in hunting; for, although agriculture rapidly became sedentary or semi-

nomadic, yet hunting was by no means wholly abandoned.

Europe, Asia and Africa now held a really immense population of agriculturalists. But at the same time there still survived remnants of the Palaeolithic peoples living their ancient mode of life near the Arctic Circle, particularly in Northern Siberia. Just as to-day the Neolithic mode of life exists among the Esquimaux, so in Neolithic times there were survivors of the earlier phase on the same edge of the inhabited world. For there will always be an overlap of cultures. These northern Palaeolithic folk seem to have passed without interruption into all the later phases of development. You can see a clear continuity between the Art of the Stone Age Siberians and that of the Siberians of Greek and Roman times. Indeed so stubborn was this ancient Stone Age culture of Asia that, even as late as the Middle Ages, inhabitants of Siberia had never properly encountered the benefits of a sedentary and agricultural existence.

## CHAPTER VI

## FARMING AND BUILDING

WITH the era of Neolithic culture came villages, and gradually groups of villages, in which men lived in common without rivalry. The earliest Neolithic villages show no trace of fortifications or warfare, no defences, and no signs of internecine strife. Tracks connect village with village and life is essentially co-operative. You will come across no weapons of war and earthworks are only devised for keeping cattle in or wolves out. Round the villages are traces of rudimentary fields, and in the houses are large grinding stones for the making of flour. Among the débris of the villages you will find bones of pig and ox. Here was the ancestor of the farmer settled in his steady curriculum of farming. He lived usually on the downlands because the valleys were impossible, and he had no instruments with which to cut down forests. The Neolithic mode of life increased in its complexity as time went on. Agriculture is a scheme of knowledge of the earth based on experience. The more you do

the more you find out. Your constant application to the soil of the lessons you have learnt as constantly teaches you more. In this settled or partly settled mode of existence there grew up architecture. The agriculturalists could rarely use the same field twice for the same crops and had no knowledge of the fertilisation of the soil. They consequently had to change their sowing-ground frequently and periodically. But they could experiment in a given area, and once a village was formed, they could, without difficulty, create an area of fields for sowing of which only half would be used in any given year. Thus the desire to remain static in one place was soon attained, and the farmer ceased to be nomadic.

A Neolithic village in England, like the great settlement at Windmill Hill at Avebury, drew its crops from an immense surrounding area of which only a certain proportion would be tilled in any given season. The building of villages laid the foundation for most of the institutions of modern life. For the village was the first community in which it was possible to create in some form almost every element of existing urban life. Once you have houses, and roadways and paths, you have rights and obligations and duties to the society. Once you have houses, you have families. With

the existence of the family there generate customs which lead to laws of property and inheritance. If family life had been in existence in the Cave Age it was so elementary that it can hardly be considered to have anticipated the main features of family life in the Neolithic Age. Indeed I think it extremely doubtful that the Cave Age produced anything more than a group of parents and children living haphazard as accommodation allowed. The pictures one sees so frequently in the popular handbooks of father, mother and baby Neanderthal man, prognathous, pugnacious, and skin-garbed, is but a reflection back into the past of family life of to-day—the first true 'Englishman in his castle'! The few scraps of relevant evidence we have concerning Neanderthal man suggests that he, as well as other races in those Palaeolithic days, lived in groups like the animals. They were not necessarily promiscuous groups—we have no evidence either way—but simple aggregations of humans. No doubt they paired off, but there is no reason to think that they had any conception of what we mean by family life, however primitive. The basis of their group was the preservation of the individual and the species. They must have lived like any other gregarious animal. But it was the invention of architecture, which agricultural life im-

plied, which could have brought the family life into being. I do not maintain definitely that it did, for undifferentiated groups could still exist in a village. But the architectural evidence, which is all we have beyond mere conjecture, gives some support to the view that the family developed out of agricultural and village organisation. How otherwise are we to explain the fact that, in Europe at least, all the houses of Neolithic villages are on a small scale, mere huts not large enough to hold more than a few people. They were just large enough to hold an average family of to-day. Sociologists theorise endlessly about the origin of the family. The archaeological facts give them a hint which they have rarely followed. The people in the Neolithic stage of European culture who first started to build houses did not know enough architecture or engineering to build larger houses. The size of their houses depended, as anyone can see who studies a Neolithic site, upon the maximum roof area they could construct. Their ability to build a roof was limited by their power to cut down logs and trees. That in turn was limited by their ability to make tools adequate to cut down trees.

The earliest huts were round, and the roof, as far as can be inferred from the known facts of the wall-circuit, was of straw or thatch or turf supported by a

central pole, with smaller radial poles or branches which supported the cap-like cover on which was the thatch. The extent of the maximum radial line, was strictly limited by the size and strength of the central pole, which in turn depended on the cutting power of the tools of the architect. The maximum size of such dwellings seems to be based on a diameter of about twenty feet; beyond this their powers failed them. Buildings of this size naturally made it necessary to divide the social group into units which, naturally enough, would tend to be pairs of men and women.

This, as I see it, is the most likely origin of the family. The limitations of the hand of man forced him to build buildings which inevitably split up his social group. The sociologist may say that the idea of the family necessitated the building of houses adequate to hold them, but I can find no evidence which would support such a view. Early man was not so ingenious as to evolve the idea of family life *ex vacuo* and then produce buildings to suit. He lived from hand to mouth. If the idea of a family life had occurred to him we should have expected to find indications of it in the Cave Age. But the caves explored, where man has camped for countless centuries, show no sign at all of any division of the caves so as to accommodate separate

family groups. When the Cave Age ended and the Epipalaeolithic period of wandering and stray settlement set in, man seems to have roamed throughout Europe still in groups or herds. Then with the discovery of agriculture came the need for a less nomadic life, and out of this grew the village. For, once settled in the plains and pastures, man had finally to abandon the use of rock-shelters and caves, and build some substitute. That substitute was, as I have described, the primitive hut.

I do not say that the family as we know it came into being at once; I merely suggest that the conditions requisite for an elementary family life were introduced by the limitations of the earliest form of architecture. No other factor in village life tended to make the family a necessity. The tilling of fields was done on a communal rather than a family basis for long ages, right down to historic times. The memory of the group thus lasted for a fantastic period of time after the village had fully developed. I do not here propose to enlarge upon the controversy which has raged for two generations over the origin of the family. There is an enormous mass of evidence drawn from anthropological data and from history to prove that the patriarchal family was both one of the most ancient and one of

the most recent inventions of mankind. The evidence is more or less evenly balanced, though I detect a stronger case for the relatively late development of any kind of family, patriarchal or otherwise. Both sides have totally ignored the archæological, and in particular the architectural, evidence, which shows beyond dispute how and when the family *could have* originated.

Just as we tend to project our own ideas of the family and family life back into the Cave Age, so we tend to project into the Neolithic Age the special Hebraic patriarchal conception of the family. Holy Writ has held us on its leash too long. Patriarchy in early times was the exception rather than the rule. We cannot say for certain on what basis the family was organised in Neolithic times. But most of the evidence suggests that the early forms were matriarchal. The predominance of the female is one of the noteworthy facts brought to light by exploration of Neolithic sites. There were Mother-goddesses of fertility, and emphasis was laid on the processes of birth. The female and her powers of generation struck primitive man the moment he was able to record his impressions. This is evident too in Palaeolithic times. All the sculptures of the Palaeolithic Age are of

females, with some emphasis placed on the representation of the reproductive organs. The well-known 'Venus of Brassempouy' and the 'Venus of Willendorf', carved with prodigious care and affection, testify to the fact that the first artists who rendered the human form concentrated on the female and not on the male. Yet one would have thought that the male figure, with his more complex and certainly more comprehensible organs of generation, would have attracted the curiosity of the artist. Among all the numerous relics of Palaeolithic art carved in bone or stone there is only one example of a phallus, but many of the figures and shapes of women. These are the facts, and we interpret them at our own risk, for as facts they are inadequate to prove with certainty the existence either of matriarchy or patriarchy in those remote times. But they give us a hint which we should be unwise to ignore.

Further evidence for the existence of a family organisation of a community and not of a mere communal and promiscuous existence can, in fact, be found in the earliest villages that have been excavated, though it is not wholly conclusive. Imagine a village of to-day long buried and then excavated. You would find the ruins of separate and individual houses, and in each house you would find the fragments of a more

or less complete equipment of crockery and domestic utensils. In each house it would be much the same: teapot, plates, saucers and cups, jars, and all the oddments of kitchen and living-room. One village would provide remains of as many sets of these objects as there were families. Roughly that is what we find in the Neolithic and early Bronze Age villages. If the inhabitants had lived a purely communal life you would have found in all probability not this wasteful repetition of objects, but a few of each, which could have been handed round as required, a common store from which borrowings could have been made as need arose. But this is not in fact what the excavators find.

. . . . .

But I must turn to the deeper and more fundamental contributions to the future of civilisation, for the organisation of family life was not of such a character that it could affect the subsequent course of mankind for good or bad to any appreciable degree. It may even be said to have contributed disruptive elements to the advancement of mankind, for it certainly tended to split up the group and introduce an element of internal rivalry and conflict. The patriarchal family promoted the predominance of male interests and influence, and so led to the growth of an authoritarian-

ism, which has subsequently had a most violent and retrogressive effect upon the course of civilisation. The growth of Fascism in our own day is based upon patriarchal family control.[10] Its demerits need no description here.

But out of this early agricultural state there grew some strange and unexpected flowers. The growing organisation of life made existence fuller and infinitely busier. There was far less time for reflection and pondering than there had been in the stage of life when men were food-collectors and not yet food-producers. The increased complexities of life allowed little time or scope for art. The objects made by Neolithic peoples were almost entirely utilitarian and lacking in aesthetic merit. Exceptional to this rule was a large area of Neolithic occupation, of a late stage, in east Central Europe and Western Russia, where pure design as such was cultivated by the craftsmen who made pots and painted them in bright colours with considerable elegance. But the main part of Neolithic Europe and the Neolithic Near East (which, of course, were not contemporary in date) show a standardised life in which art, as we saw it in the Cave Age, was wholly dead. There were no more lovely paintings and sculptures and carvings. Those first masterpieces—

and they are masterpieces by any standard at any age —had vanished and been forgotten. The agricultural life has rarely at any period of history or prehistory, been fertile in artistic activities. Farmers are too busy, too intent upon the earth and its fruits, to let the imagination roam. They are linked firmly to the soil, which they are compelled to watch with anxiety and undivided attention. Diversions are dangerous to them. While in the Cave Age man had time on his hands for long periods of the year, the agriculturalist rarely has a moment's respite from his watch. But his very industry led him imperceptibly towards one of the greatest advancements of the human mind, one which has laid the foundation stones of all modern invention. In a word, man at this new stage of development slowly forged out of his loosely-knit thoughts the first *set* of abstract ideas he ever had. Man on the soil became man the Generaliser. In the Cave Age, man had lived mentally from moment to moment, from event to event, from day to day; the hunting of yesterday was the source of reflection on the morrow, and was forgotten the day after. But we can just faintly detect the beginnings of generalisation in that odd persistence of certain shapes and fashions in the instruments that he made. As we have seen, one of the strangest fea-

tures of life in all those hundreds of thousands of years before the Neolithic Age began was that man constructed his implements with an astonishing persistence of form. In every part of the globe where Palaeolithic tools are found, they take the same shape. You cannot tell the difference between stone axes of what is called the 'Acheulean' type which are found in Rhodesia, in the Nile valley, in London, or by the banks of the Somme. One man might have made the lot. Here was one general idea of shape, and it spread round the vastest spaces of the world. Here is a paradox of human history. Man was attempting to simplify life by standardising it at the very start. Unconsciously he had emphasised his difference from the animal by *making things uniformly*. But his ingenuity halted there. This was the only general idea of which we have certainty which generated in his mind, a general idea which had a certain geometrical validity, for what he made was almost (but not quite) a geometrical shape, which might come under the classification of a mathematician. The nearer man approaches mathematics the farther away he moves from the animals.

In the latest stages of the Cave Age (known to archæologists as the 'Mousterian' and 'Magdalenian'), man made his implements approximate even more to

geometrical shapes. In his caves we find tools which are more regular and more symmetrical. The oval and the ellipse, which had been foreshadowed in the river-bank stage of Palaeolithic life, are now perfected. But, so far, these were the only geometrical shapes known. Neither the circle, nor the square, nor the sphere, nor the cube, had been conceived; and the triangle and pyramid were totally unknown. But with the Neolithic and Agricultural Age more and more shapes emerged. The circle automatically appeared in the rims of pots as well as in the roofs and foundations of huts, whose plans must have been laid down by the aid of a rough rope-compass. The circular burial mounds that were made at the dawn of the Bronze Age give us precise and accurate circles perfectly delineated by such means. The bole of the tree which held up his hut roof gave him, all unknown, the cylinder.

These generalised shapes were not consciously thought out, but came into the mind of man only as they generated under his hand. First the ellipse, from his early cutting instruments; then the circle and the hemisphere, for the earliest Neolithic pots resemble the half of a coconut; his roof-tree necessitated radial poles, and so made a flat circle and produced a cylin-

der. Here, in brief, was the first group of definite abstract shapes. They were destined to affect the whole material course of civilisation; for the basis of all mechanical invention and all solid geometry, upon which applied science rests, consists of the circle, the sphere, the cylinder, and the ellipse. Rectangular shapes came much later, and are by no means so vital to the growth of mechanical ideas and inventions.

Another great step forward has now been taken, almost accidentally. The mere conception in the mind of ideas of general shapes must have increased mental activity enormously and must have contributed to the growth of memory and ingenuity. Neolithic man may have been utterly inartistic, but he atoned for those defects by equipping the human mind with qualities pregnant with invention and discovery. And so now he moved on his course at a much faster rate than ever before.

From these mathematical conceptions of shape came the wheel, and the wheel ranks as potentially one of the greatest of all inventions. It is uncertain, archæologically, where the wheel and its uses first came into being. The potter's wheel seems to have appeared first in Egypt and Sumer. It is known in Egypt about the Fourth Dynasty and in Sumer at a slightly earlier date.

That was the first practical application of a general geometric concept. For long ages the idea of the potter's wheel had been latent in the manner of making pots. The mere turning round by hand without a potter's wheel of the clay lump that was to become a circular rimmed pot implied the more practical idea of the actual rotated wheel. But, even so, the idea of using the wheel for traction was a much longer step onwards in invention. The sledge was universally used in hot and cold climates alike for ordinary transport, for many thousands of years before the wheel was thought of. In many civilised areas the sledge is in fact still used, even where there is no snow. In England during the Middle Ages sledges were almost universally used by farmers. Probably the invention of wheeled vehicles developed from applying the conception of the simple circle, represented by a flat disk, to the mode of transport by means of rollers, which in all cultures is the earliest recorded mode by which heavy objects are moved over level ground.[11] First the cylinder and then the disk, and so emerged the wheel. The roller pure and simple was simply raised in the air by the addition to each end of it of a disk, whose wider diameter made rolling easier. Thus, almost in one moment of ingenious experiment, the

wheels and axle of a cart were produced, and the cumbrous early method rendered obsolete. Wheeled vehicles, always with solid wheels, do not seem to have developed until the Copper and Bronze Ages were in full swing in Middle Asia. Sumer was probably the home of this invention. Carts with wheels are shown in pictorial works of art found in the graves of the Kings of Ur, which date to a little before 3000 B.C. The earliest of these depicted carts, those shown on the mosaic designs of an ornament from the Royal tombs of Ur, had solid wooden wheels about two and a half feet in diameter. The wheels are evidently made of two half moons or semi-circles, riveted together around an axle about one foot in diameter. From other evidence it is also clear that the wheels of such vehicles had copper tyres.

It is hard to see exactly how the non-agricultural people of the Palaeolithic Age could ever have invented the wheel. They did not need it because their food was less bulky than that of the agriculturalist, and they had not conceived in their minds those necessary generalisations of shapes which were prerequisite for any such invention. But by the slow and steady accumulation of geometrical shapes resultant from the settled village lift of the Agricultural Age, man was

tempted to apply those shapes to actual constructive purposes. Thus gradually the whole of modern mechanical invention owes its growth to the fertility of conception and abstract thought of Neolithic peoples. Palaeolithic man had paved the way for man the maker of instruments, but while all those instruments followed a few simple shapes none of the shapes so formed, except one at a late stage of the period, was such that it could easily become a geometric shape. Neolithic agricultural man on the other hand suddenly found himself creating first with his hands and later in his mind a whole series of formal categories which immediately served him for constructional purposes. That step onwards was a big one, full of the hope of invention, packed with possibilities for the advancement and amelioration of mankind, unless, indeed, those fixed shapes and forms were later to be turned to the destruction of man. Man had not as yet discovered that his inventions could lead to the death and destruction as well as to the preservation and increase of the species. The first brilliant age of invention was also an age of peace and content.

Imperceptibly the era of Neolithic agriculture passed into a stage when the use of metals added to the amenities of life. Gold, the only utterly useless metal,

seems to have been the first to be discovered. This was natural enough, for the glitter of its nuggets must have attracted even the dullest eye; fishermen and washerwomen may have picked them up in the sands of auriferous rivers. It did not take long to find this exquisite and futile metal. Once found, gold immediately became an ornament. Soon its finders discovered that with a simple stone hammer you could beat it and shape it with ease, that it suffered no damage from heat—for its melting point is far above that of simple domestic fire—and that no matter how long you kept it, it did not tarnish or decay. No wonder that man has revered it and sought it ever since, for gold has all the virtues of the perfect ornament, and none of the defects of a useful material. Its utter uselessness at once put it upon a plane far above all other substances employed by man. For man will always admire that which does not corrupt, that which is permanently lovely to look at, and that which is easy to handle and yet imperishable. Thus generated the love of gold in primitive times. Our modern passion for gold is, in reality, an atavistic tendency. The reasons for our admiration of it are the same as those which first stimulated the first gold seekers. It is an instinct as deeply grounded as that which prompts the fear of the dark

in children. Love of gold increased the demand for it, but since the supply was always to be inadequate to the demand it soon acquired a scarcity value. So, inevitably, that which was innocently admired began to be covetously sought. In natural sequence Nature's most lovely product, gifted with the virtues of beauty and uselessness, rapidly became the simple prostitute.

. . . . .

Searching for gold in river beds and among pebbles, men found here and there chance fragments of native copper, red enough to make them think of gold, malleable when they hammered it as they hammered their gold, but more common and found in large enough pieces to be made into useful objects. The earliest worked copper is found in shapes both ornamental and useful. Copper rings and copper versions of polished stone axes are the first artefacts of utilitarian copper. Men found by hammering it that copper hardened and became tougher than it was in its native state. It helped them to cut down trees more easily, and to shape their logs, and so contributed to the elaboration of architecture.

How the smelting of copper originated is a matter for conjecture. All we know is that copper was certainly the first metal to be moulded, or beaten when

hot, into required shapes. Perhaps copper ores were found to produce pure metal by simple accident. The whole history of metallurgy is in fact a series of happy accidents. It is believed that by the accidental heating of malachite metallic copper was first discovered. Malachite seems to have been known before copper as an ornamental mineral of great beauty. It was ground to powder and used as a colour. Some user of malachite by the simple process of heating it would automatically find himself presented with a quantity of metallic copper which he would at once recognise as a metal with some similarity to gold. He would soon find that by beating it hot or cold he could make it take the shapes he desired. Copper ores other than malachite might, in a similar way, have led to the accidental discovery of the metal. A forest fire in a cupriferous region would generate heat enough to produce the metal from surface ores, or a camp fire built on stones that were copper ores might bring about the same result. Once the ores were recognised by their appearance and unusual weight, they would be deliberately sought for, and the search led to the development of mines.

The invention of bronze was another matter. This complicated addition to knowledge is universally believed to have taken place in the

regions of Persia and Mesopotamia. It was certainly not an Egyptian invention. Again some accident seems to have led to it. In the search for ores the searchers were as yet not skilled enough to know one metal from another, and the difference in outward appearance between tin ore and copper ore is not obvious to one who is not even prepared to find new and unknown metals. The smelting of a collection of pieces of tin ore by mistake for copper ore would produce the new metal. Experiment in smelting the two ores together would produce the valuable alloy of bronze, which, it was soon found, had the merit of a lower melting point than copper, greater durability, and superior resistance.

## CHAPTER VII

## LEISURE AND CIVILISATION

THE metallurgy which heralded the Bronze Age did not introduce any fundamental changes in the general mode of life. The greatest of inventions hitherto made had been effected in the Neolithic Age. Metals merely speeded up the process of civilisation and removed mankind from a rather stereotyped condition of static agricultural life. The metals gave man instruments of endurance which enabled him, in consequence, to have more leisure. Instead of perpetually wasting his time remaking broken and splintered stone tools, or hewing wood with immense labour and patience, the new metal tools allowed him to get his work done more quickly and so to devote his ingenious mind to other inventions and discoveries. That is the real importance of the age of metals to the course of civilisation.

With metals man had entered on the first comprehensive period of labour-saving. And as labour was saved, so leisure was produced for further research.

Thus it was that the Bronze Age became the greatest age of all the primitive periods of human history. More was accomplished than at any time before or after. Before metals were known, advance was slow. In Neolithic times there was no knowledge of writing; there was a poor and inefficient architecture, feeble village organisation, and no recognisable means of transport, except by sledge, from house to house or to and from neighbouring fields. The knowledge of metals gave man the capacity to cut wood and stone into new shapes. This led him to reconsider the whole nature of architecture and in his newly-won leisure he was able through art and reflection to add to the beneficial complexities of life.

Almost every element of present day civilisation can be traced back directly to the Bronze Age of Mesopotamia, of Crete, of Greece and of Egypt. The metals had afforded to mankind a long-wanted rest from the unintermittent demands of existence; they had shown the way to economy of effort and to the originating of plans of life and designs for human society. That is the underlying meaning of the Age of Metals. No striking inventions were made, no fundamental discoveries developed that had not been foreshadowed in Neolithic times, but the situation was

perceptibly eased and life became less of a concentrated struggle against Nature. Slowly but certainly Nature was retreating in her long but losing battle against the ingenuity of man. All Bronze ages that we can study proceed more or less along the same lines. Sumer was the first region to develop; Egypt follows hard on her heels, and Greece and Crete continue the story. Soon South Central Europe lights up its torch and ends by producing a creditable imitation of these more oriental and Mediterranean cultures. But in the first instance it is the plains of Mesopotamia and the Persian hills which saw the first dawn of what we can now rightly call Civilisation in the full sense. I do not propose here to give an outline of the history of these lands, nor is that the purpose of this book. I am searching to find those elements which we can isolate and examine at leisure, which contributed, by their inherent quality and value, to the march of progress.

We have already seen how, by certain inventions and discoveries, by certain brilliant conceptions and experiments, river-bank man moved onwards from the animal level of life to the human; how cave man contributed his unusual and short-lived additions to man's equipment for progress; and how a few triumphant contributions of Neolithic man finally laid the founda-

tions for life as it is to-day. Now we shall examine the way in which the Age of Metals contributed to a speeding up of the march of progress by a faster *tempo*.

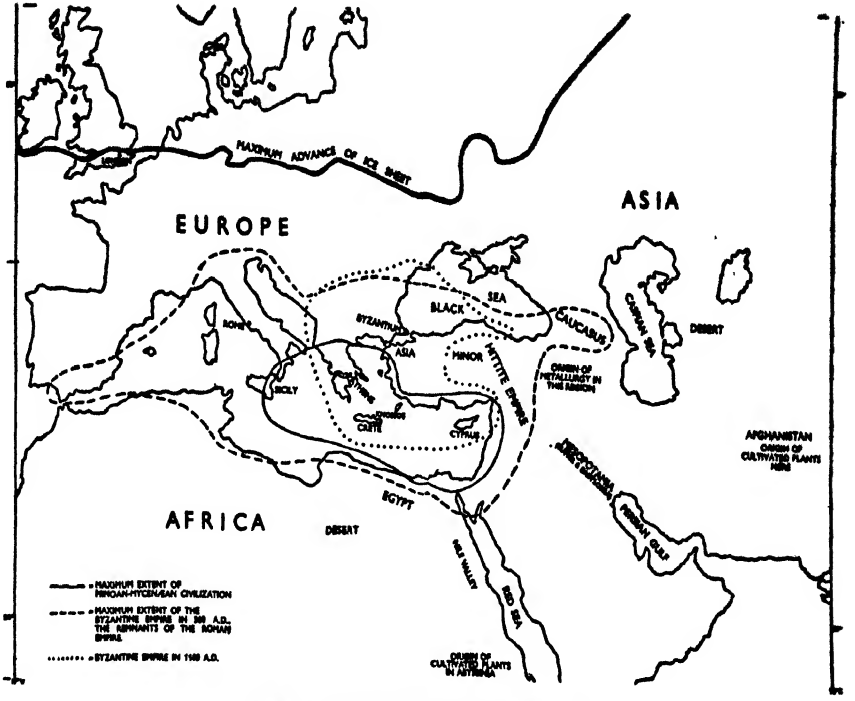
. . . . .

In the background to our inquiry I am striving to retain firmly, as my drop curtain, that ineffaceable design which, even in the dawn of things, before man was *homo sapiens*, we have described as a tendency to mutual support and assistance within the group, which leads to the survival of the species. That tendency serves equally to equip the individual within the species for his struggle. With incurable obstinacy modern writers on the growth of mankind and the development of civilisation ignore cooperation and emphasise competition. The shadow of Herbert Spencer and his perverted Darwinism still obscure the issue. But when I rename this ingrained and ancient tendency of mankind, as in the beginning of this book I have done, with the title of 'Collective Security' the words have an almost ludicrously modern ring. This at once reminds us that we are almost back once more when mutual assistance was the primary condition of any survival at all. And we recall that in such slogans as 'Workers of the World Unite' and 'Pacts of Mutual Assistance', the same ancient tendency is again making

a despairing attempt to create an international mode of survival. The alternative tendency is that suggested by the equally popular and current slogans, such as 'Isolation', 'Withdraw from European Entanglements' or, less politically and more sociologically, 'Break up the Unions', or 'Freedom for the Individual'. In facing these facts we can realise that we are facing once more the trials and fears which beset man when he first set out to forge the basis of civilised life. It is a sobering thought, alarming to those who, like myself, were educated in a world where hardly any such slogans existed or were needed. We seem in 1937 to be back once more struggling to solve primitive problems that in the Neolithic and the Bronze Ages men thought they had solved once and for all. Let us see how swiftly and courageously those who fashioned human life in the Bronze Age set out to solve them.

*Part II*

# *ANCIENT CIVILISATIONS: EXPERIMENTS THAT SUCCEEDED AND FAILED*




MAP OF ANCIENT CIVILIZATION

## CHAPTER VIII

## SUMER: THE OLDEST EXPERIMENT IN CIVILISATION

WHENCE the Sumerians came, and what was their history before they entered the region that was later called Sumer, we do not know. It is generally thought that they originated the outlines of their culture farther north, either in the mountains of the Caucasus or in the Armenian highlands. Then, some time in the fourth millennium B.C., they descended into the mud plains of the Tigris-Euphrates valley, where they slowly forged that efficient and deeply interesting civilisation which has been fully revealed by excavation only since the Great War. By the end of the fourth millennium, when Egypt was by no means so fully developed and when the whole of Europe was still struggling to escape from the dim half-life of the Epipalaeolithic Age, the Sumerians had created civilisation as we know it. From that fertile soil of Mesopotamia the gleam of new light slowly spread westwards, across the highlands of Asia Minor to the Greek islands and

the mainland; along the Black Sea coasts to the Danube mouth, and so laboriously along the Danube banks to the heart of the western world.

Firstly the Sumerians set about to protect themselves and their creations from outside attack by the teeming savages of Asia. They did this not by enclosing themselves in city walls, but by the invention, if such it can be called, of two main elements of social life, the City State and the Kingship. Unlike the Egyptians the Sumerians seem to have been profoundly social before they were profoundly religious. And even when they became religious they do not seem to have been quite so religious-minded as the Egyptians. They seem at the very outset to have grouped themselves, according to the ability of the soil to support them, into well-defined groups, and then to have concentrated those groups in closely knit communities which rapidly developed into City States. Over each was a head, someone who had the control and nature of a king. It was the first full-scale experiment in political and social organisation. From the Royal Graves of Ur we see exactly down to the minutest detail how their kings were considered and how they lived, their state and their reverence. The village of a more primitive stage

of life had blossomed out into the proper city, exactly similar, in all except the kingship, to the city-states of the Greeks, closely parallel to the city states ruled by kings of the Homeric Greek period, or, better still, to the king-governed cities of Cyprus which lasted from 1400 to 400 B.C.

This first move of defence against the uncertainties of a barbaric world was then fortified by their second invention—the invention of organised war. Here was no retrogressive move. War as such, if organised solely against aggression in a partially barbarous world, is one of the necessary elements of civilisation. The Sumerians seem to have organised military forces on the grand scale for the first time in history in order to protect that which they had created for peace—their mode of life and their cities. To-day one hears of 'mutual defence against aggression', of 'preventive war' and the like. Those projects can make us into optimists, for they are part of an essential mode of progress. What may well depress us is that at this late day in human development, men are forced to revert to methods of preservation of civilisation which belong to the remoter periods of a Bronze Age. What we now strive to do is civilised enough; the reasons why we do it are sad testimony to the decay that has set in.

The one view that, in the early Bronze Age as in any age of partial civilisation, seems wholly untenable, is that war is uncivilised in itself. The pure pacifist view is one which, if originally held by the Sumerians would have led to the complete destruction of their experiment and the reversion of their mode of life to a more brutal and savage state. Without their organised armies and their armaments and their warfare the Sumerians of these new cities would have been driven by barbaric inroads into the wilds, where they would have reverted once more to the food-collecting stage; a step back to the Palaeolithic mode of life would have supervened and civilisation would have had to wait another few thousand years before it began again. The invention of warfare and of the city state and its king, laid the solid foundations of a very real and immediate advance. The excavator of Ur, Sir Leonard Woolley, makes the following observations on these new discoveries:

'Three generations ago,' he says, 'the existence of the Sumerians was unknown to the scientific world; to-day their history can be written and their art illustrated more fully than that of many ancient peoples. . . . The real criterion of value is, how far have these people contributed to human progress, what part had they in forming that culture which is the heritage of the living world? And

it is by this standard that we must estimate the importance of the civilisation now rescued from oblivion.'

And again:

'The Sumerians believed that they came into the country with their civilisation already formed, bringing with them the knowledge of agriculture, of working in metal, of the art of writing—"Since then" said they, "no new inventions have been made"—and if, as our excavations seem to show, there is a good deal of truth in that tradition, then it was not in the Euphrates that the arts were born.'

Sir Leonard Woolley, thus concludes that the main elements of Sumerian culture were conceived and born in the original home whence they descended southwards. This is an archaeological problem that has no pertinence to the matter in hand. The important fact is that it was the Sumerians who first conceived the notion which we are discussing. Of course they were not the inventors of agriculture. The search for the origin of that great improvement must still be sought. But their great achievements were the moulding of agricultural life on a basis of urban centres, the complete development of metallurgy to a level not reached in Egypt until a much later date, and, possibly most important and far reaching of all, the invention of

writing. Hardly less important, as I have said above, was the invention of protective warfare and military organisation. As we shall see later when we examine the history of Byzantium, such use of war has preserved civilisation in its most critical moments, just as aggressive warfare has destroyed it.

That the Sumerians were conscious of their contributions to history is evident from the words of one of their own hymns, which says:

'Mankind, when created, did not know of bread for eating or garments for wearing. The people walked with limbs on the ground, they ate herbs with their mouths like sheep, they drank ditch-water.'

Here was the statement of Progress set forth by a people who were near enough to a primitive past to realise what they had done. We are too far from it to realise what such a hymn meant to its singers, just as to-day the 'Hymn of Man' in the *Antigone* of Sophocles, in which Greeks, oblivious of other worlds before them long vanished in the universal catastrophe which gave Greece birth, looked back on a world of barbarism which they had themselves only recently left.

The Sumerian contributions to civilisation astonish us not in their number, so much as in the fact that they all seem to have been devised about the same

time, or at least in a very short space of time. Hardly had the Sumerians settled in the marshes and plainlands among a most primitive indigenous population, which was then in a simple Neolithic stage of life, before they began to build their cities, to conceive of massive rectangular architecture and to evolve the institutions which I have described above. Hardly had they invented the first known form of human writing, cuneiform script, an invention which is now dated to about 3000 B.C.,* than they were using it for the enshrinement of a system of laws.

Their army seems to have consisted of disciplined troops who used the phalanx, armed with immense pikes, helmeted and armoured. On the famous 'Stele of the Vultures' in the Louvre you will see Prince Eannatum advancing at the head of his solid phalanx, which thus antedates the invention of Alexander the Great by several thousand years. On the Stele of Naramsin also in the Louvre, you can see the king with his troops defeating the wild people called the Lulubu, in their mountain fastnesses. By protective war the Sumerian conception of the state was consolidated; by internal law it was given power of survival. And the most astonishing thing of all is to find

* W. Schmidt in *European Civilisation*, Oxford, 1934, p. 136.

that the state so founded never foundered. No catastrophe ultimately overwhelmed the Sumerian mode of life, and it did not fade away until it had contributed its advantages to the rest of the world. For Sumer changed into Babylonia, by a series of normal changes, not by an overwhelming catastrophe; Babylonia became fully semitized into Assyria, but the nature of life was little altered. Assyria was absorbed into Persia; later Persia, which was perhaps the first alien domination, came under the nominal sway of Greece until native elements were reasserted and the Sasanian Empire revived ancient modes of life towards the close of the Roman Empire. Rome and Roman methods never penetrated far into the valley, and Greek influences only affected it in Byzantine times to any large extent. Even then, the influence of Byzantium on the Sasanian Empire was no greater than the influence of the Sasanians on Byzantium. Only in A.D. 638 was this continuous mode of life which had survived all shufflings of despots and masters, broken and altered. The Arab conquest of Persia in that year and the overthrow of the Sasanian dynasty, the Abbasid Caliphate which followed until A.D. 809, and even the Seljuk intrusion of 1037, left the main life of the region dislocated, but not finally changed. It was the Mongol invasions of

1220-1287 which finally rooted out this long lived civilisation which can rank as the first and the most persistent in the history of the world, for it had lasted in some shape or form for some four thousand years. The eight hundred years (or less) of the Hellenes, the nine hundred years (at a generous maximum) of Rome, and the thousand of Byzantium compare oddly with this long record.

## CHAPTER IX

## EGYPT AND THE ARREST OF PROGRESS: EGYPT AND SUMER COMPARED

IN EGYPT things followed a course which was in some respects similar. The Egyptian mode of life was fundamentally different, its origins quite unlike those of Sumer, and its contributions less fundamental. Egyptians were to the inquiring Greeks the oldest people on the earth. We can truly consider them as the Greeks did. Indeed, we have certain archaeological proof that they were far older than the Greeks knew. For we can trace their ancestry straight back to Palaeolithic times. Or, perhaps it would be wiser to say that man lived continuously on the banks of the Nile from Palaeolithic times down to to-day without violent changes or catastrophes. That the Egyptian stock, as we know it, was not subject to periodical alteration by intrusion and addition of other stocks it would be absurd to deny. But substantially there has been more continuity of race in the Nile valley than in any region of the earth, a continuity vastly aided by the almost

complete absence of natural disasters like glacial periods, earthquakes, volcanic disturbances or floods, and by the favourable condition of a river whose rise and fall was so regular as to be capable of exact calculation. Hardly anywhere else can such conditions be found. Mesopotamia was no such paradise. The Nile flood is easily controlled and regular in occurrence. A low Nile may cause anxiety but not famine. Famines are almost unknown in Egyptian history. A high Nile may be inconvenient but it never devastates. But the flooding of Tigris and Euphrates is irregular and incalculable, and the drainage of the Mesopotamian Delta imperfect.

When the Nile was as vast a river compared to what it is to-day as our British Wiltshire Avon was compared with the modern streamlet, Palaeolithic man camped on its banks and multiplied on its sloping channel. The rich river marshes were filled with wild animals for him to hunt and of food of all kinds to collect. He could watch the various plants sow and resow themselves in the Nile mud and pluck them each season. Here agriculture could be seen organised by Nature herself. But Palaeolithic man continued for countless centuries to manufacture his stone tools, which are indistinguishable from those found in the gravels of

the Thames or Avon. He went through precisely the same routine of development. But no glacial floods came to bury his instruments deep in gravel terraces and you will find them in Egypt to-day, much as he left them, or at least buried only to a shallow depth by the natural accumulations of time, lying on the surface of the sandy deserts which then were so fertile. The Neolithic agricultural stage came, inevitably discovered as a mode of life by the simple process of observation. Probably agriculture started in several centres more or less about the same time. It cannot conceivably be considered as one of those brilliant discoveries made in one place by one people and then diffused round the earth. Its diffusion was from several centres. For primitive man is not so foolish as to be unable to observe Nature sowing her crops and so to copy her method. But the Nile valley was the most excellent of all the nurseries. So inevitably along the Nile banks rose a culture as vigorous and as interesting as that of Sumer—but not so inventive or so persistent. While Egypt to-day has come down to us with even more continuity than the culture of Mesopotamia, yet Egyptian contributions to modern life are less profound and less numerous. Perhaps life was too easy for these valley-dwellers, their tasks too simple, their

problems not serious enough to provoke them to new inventions and ingenious creations. Egypt passed, after three thousand years of continuous history, under the Greek yoke of the Ptolemies—a mere surface domination—and then survived little changed under Rome, until, like Mesopotamia, its nature was reduced in quality under a fierce Arab domination from which it has never recovered. But whereas the Mesopotamian peasant to-day is Arab and probably has little Sumerian, Babylonian or Sasanian blood in his veins, the modern fellahin of the Egyptian fields and villages have altered but little from their ancestors of the fourth millennium B.C. With so much persistence of type and of race it is curious that so little of Egyptian creative organisation, so little of the ancient Egyptian mode of life should have persisted. I suspect that Egypt contributed so little that was fundamental to modern life that only the husks have survived. Indeed a comparison between Sumer and Egypt in regard to their respective contributions to the advancement of civilisation is most instructive. While from Sumer we get the primary form of the City State, more feudal than the Greek, but no less the city-state in essence; while we get the first form of organised defensive security, elaborate irrigation planned on a scientific basis and a form

of town architecture which is far more European in manner than Egyptian, the contributions of Egypt are lamentably small. Perhaps the underlying reason is that the Sumerians faced problems that the Egyptians never had to consider. In the Mesopotamian plains flood and unequal rains, rivers that sometimes ran in spate and sometimes dried up, were factors that drove the inhabitants to create a life that was almost wholly bounded by practical considerations. The imminence of barbarous mountain folk forced them to organise defence; the uncertainty of crops persuaded them to indulge in experiments which culminated in the science of mathematics, land-surveying and astronomy, in which Mesopotamian peoples were always pre-eminent. Where Nature is against you your inventions have to be the more fertile. But in Egypt Nature wore her most friendly guise. In northern Mesopotamia the winters can be bitter and snowy; in Egypt they are hardly perceptible. The Nile is the only river in the world which behaves with a clocklike and impeccable regularity. Its rich mud is a gift from heaven which no other country can rival. The Nile valley is sharply, almost absurdly delimited on each side by desert, so that hostile tribesmen, if they can exist on the flanks of this long green valley, are hard put to it to survive

in the waterless desert as long as the valley folk can keep them off at a moderate distance. In actual fact the Egyptians rarely had any trouble at all with the Libyan savages and their only invaders came along the valley strip from the south or across the broken country to the east, which, even so, was forbidding enough to invaders. The actual coastline from Palestine was perhaps the only route along which invaders could safely come. This situation was totally unlike that of the rich plains of the Tigris and Euphrates, bounded on the east by the Persian hills, from which at any moment a horde of hostile people might descend, after massing unseen in the innumerable gorges and hollows of that barrier.

And so the Egyptians at an early stage of their culture became a reflective and contemplative folk. Religion and magic, the after-life and the future world became their obsessions as soon as they had created an organised society. The matter-of-fact Sumerians and Babylonians had, it is true, their legends, their innumerable deities and their magic, but their legendary heroes, like Gilgamesh, were more like fairy princes or Greek heroes than the abstract and remote deities of the Egyptians. The Sumerians rarely had time for reflection, for they were forging their way of life against

constant peril. Their flat plain was divided into its city-states, with their dominions surrounding them. Each state produced a dynasty of kings of whom one, or sometimes two at two different states, held authority and hegemony over the whole land. The hegemony shifted from age to age from city to city, as a man of energy and genius emerged in one town or the other. And all the time there were raids and alarums from the mountain folk. City after city was sacked and rebuilt again and again. Since the Sumerians themselves had in the dim past come from the Persian mountains they knew well enough the ways of the barbarians who still lived there and had taken the homes they had vacated ages before. (The Sumerians are thought to have preserved the memory of their ancient hills in the towering *ziggurats* which served as palace and temple in their cities.)

Gradually other races, mainly Semitic, permeated the Sumerian racial strain and the Babylonians of history emerged. With the Babylonians, as with the Sumerians, we detect that element of hard common sense and keen practical outlook which is lacking at all periods in the Egyptian. Towards the end of the third millennium B.C., the world's first law-giver emerges—Hammurabi, probably the Amraphel of the

Book of Genesis. He reigned over Babylon for forty-three years and his code of laws was found inscribed on a black stone tablet at Susa, in Elam, by French archaeologists in 1901. Forty-four columns containing 248 separate clauses survive from this document. The provisions of the code that survives relate to civil and criminal law. It is the first recorded code of laws in the world and indicates how the settled life of the Mesopotamian plain had called for the most meticulous organisation of behaviour. The code represents a system of custom and habit that had evidently grown up in the country in the remoter past. Throughout the code one observes how pronounced was the idea of private property. For here in the mud plains were innumerable freeholders, among whom the greatest crime was interference with boundaries and with irrigation. For, on a proper irrigation depended the life of the community and of the individual. The only place where irrigation to-day has an equal and similar effect on law and order is in the arid plains of Cyprus, always insufficiently supplied with water, always in the summer facing a crisis of irrigation. In Cyprus, as in ancient Mesopotamia, the bulk of crime is concerned with irrigation. In Cyprus to-day murder is a fairly common crime, but on investigation it almost always

proves to be due to one of two causes—love or irrigation. Love is a constant and perpetual source of homicide in all ages and climes. Irrigation becomes an even more potent cause in lands where every trickle of water is calculated, and to steal your neighbour's water supply is equivalent to starving his family.

The Code of Hammurabi is, by our standards, extremely brutal. But we must remember that those who made it were dealing with a civilisation which had risen literally from the mud, and which clung most tenaciously to its creations, to its social structure and its ideals of city life. Those who broke the contract and destroyed the covenant by which all men lived were ruthlessly dealt with. The whole character of the code suggests that it is derived from common consent and not imposed from above by any absolute monarch. Codes so derived are often more ruthless and crude than those conceived by a single despotic mind, paradoxical though this may seem. If proof were needed one might recall the codes of behaviour first devised by Soviet Russian troops for their own disciplining. I came across one such instance during the war, where Russian troops, having disowned their officers, formulated a code of discipline for themselves which was far more brutal and drastic than any mili-

tary discipline of the Tsarist officers. Hammurabi was no enlightened law-giver, but one who codified the current usage of centuries. In his code one sees how equal treatment for citizens is the most marked characteristic. Officers of the Crown, owners of slaves, magistrates and officials are all alike controlled by a method of justice which is as abrupt as it is final. Death or mutilation are frequent punishments. Minor offences are dealt with by severe money fines. Family irregularities, as in all early stages of civilisation, are severely dealt with. Incest and adultery were capital offences. Very detailed are the ordinances concerning the development of property:

'If a man,' says the Code, 'neglect to strengthen his dyke and a break be made in his dyke and the water carry away the farm land, the man in whose dyke the break has been made shall restore the grain which he has caused to be lost. If he be not able to restore the grain, they shall sell him and his goods, and the farmers whose grain the water has carried away shall share the results of the sale.

'If a man rent a field for cultivation and do not produce any grain in that field, they shall call him to account because he has not performed the work required in the field, and he shall give to the owner of the field grain on the basis of the produce of the adjoining fields.'[12]

On the other hand, if a man's field, through no fault

of his own, is flooded and ruined, he gets a remission of rent and his contract is altered for that year.

Law and order were maintained by the community. Brigands were put to death when caught, but if a robbery took place and the brigand escaped, the community paid—'the victim shall make an inventory of his loss on oath and the city and its governor, in whose jurisdiction the robbery took place, shall compensate him for his loss.' Officers, constables and officials were liable to punishment like every ordinary tenant, for neglect of their property. Individual property was firmly protected, but only on the assumption that it was also communal property, the care of which was a duty to the community. This contrasts strongly with our own property laws: in a modern sophisticated community where the preservation of the society is not so urgent a problem, the private property-owner can neglect his property to an almost scandalous degree and the community cannot intervene until his neglect is liable to produce danger to health or to life and limb. A farmer can farm his property as badly as he likes without intervention of the state. Only an impending threat to the whole social fabric in modern times will produce legislation of the type normal in Mesopotamia. During the Great War the government forced land-

owners to develop land in the interests of self-preservation, but, once the external danger passed, the old legislation was restored and the State no longer interfered to force property owners to look after their property. The Babylonians were still in the stage of preserving civilisation against disruptive forces. Today we tend to think that no such disruptive forces exist, despite the lessons of wartime.

The early growth of private property in Sumer is proved by the very early occurrence of engraved sealstones, which are everywhere in antiquity the proof of private ownership. They are the signature which an individual fixes to what he owns. The early dynasties of Sumer attest such private ownership, which later became the basis of land tenure in the plains. But the community was never forgotten. Throughout Greek history the same concurrence of private property with the communal interest was always present. In a long and detailed city-inscription from Heracleia, a Greek colony in Italy, are the ordinances of the fourth century B.C. concerning the ownership of fields and orchards. Exactly the same terms are laid down as in the code of Hammurabi. If a man has landed property he must look after it. Inspectors appointed by the city council are detailed to see that he grows his produce

properly and to the maximum amount of production.

It is a common delusion to think of Babylonia as a king-ridden and priest-ridden country where law was what the king or priest said it was to be, and the people a mere aggregation of instruments of the royal will. The archaeological discoveries of the cities of the Mesopotamian valley and the code of Hammurabi show that the community was the first consideration. For in Sumer man had founded his first organised society and in Sumer the individual was the pivot round which the machinery of society turned. True, the kingship came, as the Sumerians said, 'from on high' and, as the graves of Ur testify, the king was treated as a person of such importance that wholesale sacrifice of his servants, staff and wife or wives was an essential part of his burial. But it was done with the same matter-of-fact outlook that controlled the daily life of the citizen. There were no immense pyramids made by thousands of beaten slaves who laboured for one man's glory. The Royal graves were humble affairs, as structures, hardly different from those of commoners. The king merely transported to the other world the private property which he had enjoyed in this. The Egyptian pyramids implied a totally different outlook. They

represent, in the words of Professor Breasted,* one of the greatest Egyptologists,

'the effort of titanic energies absorbing all the resources of a great organised state as they converged upon one supreme endeavour, to sheathe eternally the body of a single man, the head of the state, in a husk of masonry so colossal that by these purely material means the royal body might defy all time, and by sheer force of mechanical supremacy make conquest of immortality. . . . The pyramids of Egypt represent the culmination of the belief in material equipment as completely efficacious in securing felicity for the dead.'

Here was a profound difference between the two peoples—the one utterly practical, engaging in religion mainly as a system of organised ceremonies which had a profound bearing on daily life and the hazards of natural forces, the other, immune from the hostilities of Nature, prone to reflection and fertile in religious experimentation for its own sake. Sumer advanced the cause of civilisation by sheer practical experiment.

Egypt at an extremely early stage of its culture began those luxuries of rumination which a hard-pressed community like that of Sumer could ill afford. Thus we get from Egypt the first abstract reflections on behaviour. At first, early in the fourth millennium B.C.,

* *The Dawn of Conscience*, 1933, pp. 63-4.

the primitive cultures of the Mesopotamian plain and the Egyptian valley alike seem to have lived on a simple rudimentary moral plane where a code of morals, as we understand such codes to-day, was a purely social development, derivative ultimately from a quasi-animal stage of existence. To quote Professor Breasted again* in regard to this stage of development in Egypt:

'It is important to bear in mind the now commonly accepted fact that in its primitive stages, religion had nothing to do with morals as understood by us to-day. Furthermore, the earliest morals were only folk-custom which might have nothing to do with the gods or religion.'

And so when Egyptians began to ruminate, the results of their ruminations reflected the moral stage of development of the time. A mystery play written at Memphis in the middle of the fourth millennium B.C. by priests, is a study of the origins of the world. In it appear a number of judgments based on customs which had not yet become a system of morality. It contains, says Professor Breasted, the 'oldest thoughts of men that have come down to us in written form'. The temple-thinkers, whom we cannot perhaps definitely classify as priests, initiated this mode of inquiry into origins, thus giving to Egypt a definite priority in

* Id. p. 18.

speculation in the history of the world. The Memphite drama is in no way representative of the life of the people as a whole. It was the aristocrats of the royal court and the priesthood who produced an elementary system of moral statement which later descended to the nobility and so to the masses. In this Memphite mystery play we see how early in human development someone seized on the fundamental assumption that it is the non-material things which are fundamental. The drama begins with the statement:

'It came to pass that heart and tongue gained the power over every member, teaching that Ptah was in every breast and in every mouth, of all gods, all men, all cattle, all reptiles, all things living, while Ptah thinks and commands everything that he desires.'

In other words, thought was the supreme controller of life and speech its instrument. Moral behaviour is here for the first time in human history defined thus:

'As for him that does what is loved and him that does what is hated, life is given to the peaceful and death to the criminal.'

This is the simplest statement of social morality conceivable; it is the very starting point of all moral codes, for it gives the social background of action and its social sanctions. I have yet to be convinced that

there has been any advance from this basis, from this simple theory promulgated some fifty-three centuries ago.

But the very priests who gave out these statements at the same time saw that it was to their advantage to associate with a purely social system of behaviour certain purely theological conceptions. Irrationally, coming as a complete *non sequitur*, the Omnipotent Sun God, Ptah of Memphis, was added as a sanction to morality. For the profoundly aristocratic form that the earliest Egyptian society took demanded some unearthly justification for the social structure. The intrusion of a deity into a social background was a complication not needed to make the moral speculations more complete. But it was needed to keep the social structure firm and undisturbed. Yet that the priests and kings, right down to the close of the first phase of Egyptian history, still felt that the spiritual world was not entirely in control of their life and destiny is proved by their almost frantic appeal to the material world to save them from death, as illustrated by those most amazing examples of human folly and stupidity, the Pyramids. For the discovery of morality and the addition of a controlling deity to its system still left the speculators with the problem of death

to solve. Palaeolithic man, at least in the Neanderthal period, had taken it for granted with sublime simplicity that death was like sleep, that one awakened to a new existence, and so he buried his dead where they had lived with their humble properties. Hardly different was the Sumerian way. The properties were more elaborate and numerous; the method and outlook remained the same. But the Egyptian was at the outset obsessed with death and the after-life. The whole history of Egyptian social life is the history of a people who were always preparing for death. It is as though they could not bear to think of leaving their rich valley where life was so simple and so easy: death was almost inconceivable and had to be circumvented. Egypt was hagridden by these thoughts. Morality and its study survived from the time of the Memphite drama down to a later time when the 'Maxims of Ptahhotep' provide the first statement of right conduct in secular matters in any literature. These maxims are as oriental in form and outlook as the Koran, but shrewd and almost Machiavellian. Even here morals are still social and the link with theology is purely superficial. We hear of the term *Maat* which means actually 'moral conduct' and later 'Right' or 'Justice'. It is a word unknown to the earlier Memphite drama.

Slowly a vocabulary of terms for a moral philosophy is being built up.

But there is a breakdown in moral development. The moral reflections of the priests merely recorded social custom. Their religion was concerned with the moral system as oil is concerned with water. There remained, outside all these, the problem of death, unsolved and unrelated to morality or theology. A lovely song, known as the 'Song of the Harp player' shows the extent of disillusion at the end of the period that produced the Pyramids.

> 'Put song and music before thee,
> Behind thee all evil things,
> And remember thou only joy,
> Till comes the day of mooring
> At the land that loveth silence.'

The world's first attempt at philosophy had evidently broken down and the Egyptians had reached the Age of Scepticism. This was furthered by a political breakdown and the suppression of the lower orders. An age of prophets and Messianism ensued, as it usually does when social conditions are bad. But in the 12th Dynasty came a re-establishment of ordered government and a new emergence of moral speculation. By slow degrees the conception of abstract social

justice appears. A fragment of Egyptian literature of this period, called 'The Tale of the Eloquent Peasant' is eloquent more for what it tells us of the abuses of princes than of the amelioration of the condition of the serfs. The picture it draws shows with what bitter slowness Egyptians' ideas of abstract justice and morality were in fact developing. Here, indeed, was an appalling delay in the development of civilisation in Egypt. For Egypt, unlike Sumer, had developed a cast-iron social order, fixed firmly by a hierarchy of priests, and all the 'eloquent peasants' of the Nile valley were not able to change it. The 'Tale of the Eloquent Peasant'* is no more than a feeble political squib to show exactly how little the princes and priests cared for their subjects. In effect the document reveals the conditions of Egypt in the days of its glory, but gives no hint that conditions were improving from the point of view of the essential spiritual needs of a civilised community. One wonders how long the Greeks would have endured the conditions of the Eloquent Peasant, and one is appalled by the similarities between the state of affairs described in the pamphlet and those of modern Fascist states.

* It survives as a contemporary papyrus of the Feudal Age and is in the Berlin Museum. It is conveniently summarised by Breasted (*Dawn of Conscience*, p. 183 ff.).

With the steady growth of sacerdotalism and its assistant Magic, we see now in Egypt a tendency to slide backwards on the slippery path of progress. Abstract moralising becomes the prerogative of the priesthood.

Under Thutmose III came the great imperial expansion of Egypt and, with it the development, as a natural concomitant of world-power, of Monotheism. World-relations produced universalism. From this in turn came the monotheism expounded as a new religion, of Ikhnaton, a social and religious revolution that might have changed the whole course of Egyptian history and launched her well on the road to advancement in the main elements of civilisation. The all-powerful theocracy was suppressed for the first time. The Eloquent Peasant nearly had his chance. But the mere fact that no one has found out the way in which Aton-worship, the monotheism thus developed, and Ikhnaton himself, were disposed of, is itself testimony to the immense power of the vested interests which had been overthrown. The revolution was suppressed and sacerdotalism is paramount again. From now on Egypt is on the down-grade as far as abstract speculation and freedom were concerned. When the Greeks first began to come to Egypt, awed by its antiquity and overwhelmed by the multiplicity of its gods, its castes

and its ceremonies, what they really found was a nation of fellahin ruled with a rod of iron by a Society of Antiquaries. They were lost in wonder at what they saw. But it is not remarkable that, to judge from the pages of Herodotus, there is no hint of admiration in their wonder. His pages are like those of enlightened seventeenth-century British travellers who visited Turkey and marvelled at its Janissaries and its Seraglio and its peasants and soldiers.

Egypt and Sumer together laid the first solid foundations of civilisation, even if the structures that they built have perished. From Sumer we have inherited the idea of city life and defensive war, of the habit of putting important things into writing, of the merits of private ownership and the advantage of an enlightened bureaucracy controlled by good laws.

From Egypt we seem, on reflection, to have inherited almost nothing. That some four thousand years of uninterrupted organised life in the Nile valley should have bequeathed us so little that we have to pause and rack our brains to think what is our 'legacy of Egypt', is a pathetic commentary on the Egyptian achievement. Not that civilisation ever broke down or was even destroyed at any time in Egyptian history. Nothing seriously interfered with the course of events.

The Hyksos intrusion was, in a sense, a slight set-back, but the newcomers absorbed the system of Egyptian life almost as soon as they had entered the valley. So, later, intrusive Greeks and Romans were absorbed by Egyptian ideas. Egypt imposed on Ptolemies and Emperors alike their ancient divine kingship, so that Greek princes rapidly learned to describe themselves as gods in a way which would have made Greeks elsewhere laugh with scorn, while Romans exalted the attenuated divinity that hedged a Roman Emperor into a real godhead. From start to finish in Egyptian history foreign ideas were quietly but firmly suffocated, while internal unorthodoxy was violently strangled. Once in Egypt you became Egyptian.

Even in minor things the Egyptian contribution is almost negligible. While Sumer contributed a mode of writing that became the almost universal mode of the ancient world down to Persian times and the age of Xerxes and Darius, no one ever copied the pernickety hieroglyphics of the Egyptian, which, even in their cursive form, were not easy to handle. In metallurgy Egypt learned, and learned very late indeed, from Sumer. Sumerians had mastered the secrets of bronze working long before Egyptians, and when iron was first worked it was Asiatic smiths of Anatolia and Cappadocia who perfected this most difficult of all primitive

crafts. The Egyptian Iron Age came equally late and Egyptians never mastered the craft or liked it.

In architecture perhaps, the Egyptians handed on something. They certainly were the world's leaders in the craft of handling intractable stone. Their methods of craftsmanship in the Bronze Age were astonishing, for all their craving and finishing had to be done with instruments of stone except in the case of the carving of limestone, which was soft enough to be cut with copper and bronze. Their methods of masoning stone were equalled only in fifth-century Greece, and were so precise and perfect that modern masons, even with the latest scientific appliances, cannot produce the effects of the Egyptian mason. To the Greeks also they transmitted some of the elements of temple-building, though the Greeks made an art of what the Egyptians had succeeded only in making a superb craft. But behind the patience and untiring skill that went to the creation of their statues and their temples and their pyramids was the background of those 'eloquent peasants' who were driven to do the work. The workmen of Egypt were patient and painstaking because those were the only mental virtues they were allowed to exercise. Herodotus marvels at the oppression which built the pyramids.

'Cheops,' he relates, 'forbade the Egyptians to offer sacrifice and, instead, compelled them to labour one and all, in his service. A hundred thousand men laboured constantly and were relieved every three months by a fresh band. It took ten years' oppression of the people to make the causeway for the stones of the pyramid. The pyramid itself was twenty years in building.'

No wonder that from so well organised a system of labour-camps the dictator succeeded in producing masons whose technique was above reproach, and an example to the world. By similar methods Mussolini, to the admiration of simple-minded tourists, succeeded in making Italian railway-trains punctual and Italian drains inoffensive. But it is superfluous to ask if the erection of such vast mountains is necessary for the production of such very small mice.

In art, Egypt has bequeathed superb masterpieces, above all in the art of sculpture. But she also has to her credit enormous vulgarities. The tomb of Tutankhamen is proof enough of that. And in art Egypt has made what is almost her sole contribution to posterity. Otherwise she succeeded in putting civilisation into cold storage for an immense period of time. No literature worth the name, no poetry and no invention came from her land-locked valley to help man in his self-improvement. If we look for anything to-day whose origin is Egyptian we shall look almost in vain.

## CHAPTER X

## TWO EXPERIMENTS AND THEIR FAILURE: CRETANS AND HITTITES

CIVILISATION seems thus to have been begun in two distinct centres and to have followed two parallel but different courses of development. So powerful were the foundations, as I have shown, that the structures built were not finally destroyed by any catastrophe. The Mongol and Arab invasions in the end conquered Mesopotamia with great devastation, but the Khalifate rule and the might of Baghdad carried on the ancient structure, just as the Turkish conquest of Byzantium later was rapidly Byzantinised in the first century of its life. Egypt changed hands, from Ptolemies to Romans and Byzantines and later to Mamelukes and Arabs, but the core of Egyptian life in the countryside has probably remained more or less unchanged. Even some shadow of the divine kingship has lingered; otherwise it is hard to understand how the Egyptians tolerated in King Fuad an Albanian potentate who was completely alien to Egyptian modes of life. The foundations of civilisation were strong,

indeed, to carry the conceptions of urban life invented by Sumerians and Egyptians through so deeply disturbed a period as that of 1200-900 B.C. or 500-1000 A.D. Yet those conceptions survived. Perhaps it was their very static qualities that gave them survival, for in a system which is so complete that little or no room is left for variation, the resultant organism has a peculiar brittle strength of its own.

But in two regions two new modes of civilisation came into being, which in each case owed something to the pre-existing Sumerian and Egyptian cultures. Being latecomers into the laboratory of experimental civilisation they inevitably studied, or at least were unconsciously influenced by, the successful experiments of their neighbours. In central Asia Minor and north Syria there arose early in the second millennium B.C. the strange new empire of the Hittites. Here was an experiment in inland feudal urban life and imperial organisation, in the interior of a large rectangular peninsula, which deliberately disregarded the sea and the maritime communications that surrounded it on three sides. It was an experiment in land-power started by a people who had newly arrived in a region where they were not indigenous.

In the island of Crete another experiment in civilisation began in the early periods of the third millennium B.C. Here a race of islanders founded a new experiment that was purely maritime, that is to say, it staked its life on controlling the sea and the maritime communications that surrounded it on all sides.

Both these experiments are known to us only from the discoveries of archaeology. The first experiment represented by the Hittite Empire was an unopened book until the '80's of last century. The second, represented by the Minoan world and the Mycenaean Empire that developed out of it, was unknown to historians and scholars until 1896. The facts that concern both have been revealed solely by excavation, so that in both cases we are confined almost as closely to material facts for our evidence as we are when we consider the history of the Stone Age. While most of what we know of the Sumerians has been gleaned from archaeological research and excavation, yet they were known always as the remote background of Babylonian life. Down to the end of the Babylonian kingdoms the Sumerian language survived and was revered by priests and scholars in the same way as Latin survives to-day. Sumer was to later Mesopotamia what the Roman Em-

pire is to us to-day, the history of a great past which survives to a large extent in the present.

But the Hittite Empire passed out of human knowledge and did not survive even as a memory. Even the Greeks had never heard of it, though only a few hundred years intervened between the Hittite collapse and the Greek birth. Similarly the Minoans vanished from human memory almost as completely as if they had never been. Even though their experiment had been made in the heart of the Greek Aegean, in a few hundred years they, too, had faded into a fairy story, and we have no hint that the Greeks ever believed the fairy story to bear the imprint of truth.

In effect, civilisation had at length reached a stage in which experiments were being made to advance its cause. But now the experiments were for the first time proving unsuccessful. The first great check in human progress is beginning to be apparent. Let us examine these two experiments briefly.

The Minoan world can be said to have lasted as a fully-fledged civilisation from about 2600 B.C. to 1400 B.C. and then its place was taken by a similar phase of civilisation, the Mycenaean which continued the mode of life (with certain changes and differences) initiated by the Minoans down to about 1150 B.C. It was then

completely blotted out by violence, invasion and deliberate destruction.

The Hittite Empire cannot properly be said to have established itself much before 1500 B.C. and it lasted only until about 1200 B.C. It was then utterly destroyed by violence of the same kind as that which destroyed the Mycenaean world. The Hittite Empire can well be said to be the shortest-lived empire in the history of the world. It was a rapid experiment that as rapidly failed. But the Minoan-Mycenaean world lasted for four times as long.

Before examining the causes which produced this first break in the history of civilisation it may be useful to analyse the nature of the two cultures and see what contributions they gave, if any, to the general cause.

At some remote date in the fourth millennium B.C. or earlier, influences and immigrants alike seem to have crossed the seas that separated the island of Crete from the shores of Syria and Asia Minor, and established themselves in Crete. There they seem to have fused with indigenous peoples who had for long ages lived in a phase of the Neolithic mode of life which had continued without perceptible change or alteration for several thousand years. The knowledge of metallurgy and architecture came to Crete in the early

third millennium, perhaps from Sumer. Although there was at a very early date a contact with Egypt it is most unlikely that Crete learned her metallurgy from that source, where metals were known late and were never so widely in use as in Asia.

The distance of the island by sea both from the Asiatic coast and from Egypt gave her the natural protection of the ocean. Since neither Egypt nor the still barbarous lands of Asia Minor, nor the Syrian shores that gave Sumer its only ultimate outlet to the Mediterranean, were held by any organised fleets of consequence, Crete was likely to be visited only by occasional ships of commerce. Since also Egypt used the ships she had for local protection and to aid her control of the Palestinian coast, and was content in her valley without pretensions of Empire on the sea among the Aegean islands, there was no power likely to seek overlordship of the Minoan world. Nor on the other hand did Minoan Crete ever show any aggressive intentions towards the Levant. The only conceivable enemies who were likely to interrupt the course of life in Crete were barbarians who were skilled enough to use the sea as a mode of transit. Potential danger from outside was thus limited to stray pirates who may have developed among the Cycladic islands and in the inlets of

mainland Greece. The Minoans had in their island a lovely and fertile background for experiment, undeflected by the imminence of danger from without. A small but efficiently organised fleet of armed ships was sufficient to ward off any dangers from pirates. Throughout the whole history of Minoan Crete and the Mycenaean Empire of the mainland there is no hint of any attack ever having been launched either from the Egyptian Delta or from the harbours of the Levant.

Crete was always, and still is, the most fertile and amenable of the Greek islands. Her climate is the finest in the Greek world, with a temperate and short winter, fresh sea winds at all times of year (except when the Saharan wind from the south blows), and a reasonable rainfall induced by wooded mountains. It is a land where life is made easier by Nature than in any other part of the Mediterranean. The summer is not intolerably hot like the summer of Egypt, and the winter is not a wet and windy season as in mainland Greece. It was the ideal home for the development of a new experiment in civilisation.

The simple agricultural life of the Neolithic inhabitants gave way slowly to a more complex and more varied existence. Small townships grew up based largely

upon internal coastal trade. Villages were built on the shores of the deeper bays and gulfs, sometimes on small coastal islands, and inland—though here more rarely. Cnossos, situated in a hollow in the hills four miles from the sea, was for long ages a thriving Neolithic community based on agriculture; it blossomed into a large town as metallurgy developed. Phaestos, Mallia, Mochlos, Pseira, Gournia are names which record sites of the known towns of Crete. It is significant that most of the towns and villages developed in the eastern half of the island, probably because it was in the eastern end that the various stimulating influences from the Levant had first arrived.

As the various townships developed and prospered and grew rich, individuals of energy emerged and gradually established a personal predominance. But there was no resemblance at all to the kingship of Sumer. For we find the small villages and townships at first organised on democratic lines, to judge from their planning and their architecture. At Gournia, one of the best preserved of the Minoan sites, the earliest phases of the town, which could have held perhaps 2,000 inhabitants, indicate that all alike lived in houses of the same type and size. The source of wealth of the coastal towns was almost certainly fishing and coastal

trading. Gournia, like all the other known townships, had no trace of defensive walls and no hint in its planning that the inhabitants apprehended any external danger. At Gournia in its later phases, appears at last a large and finely built house that can rank almost as a minor palace. Clearly some individual had set himself up or been set up by some outside authority as governor or squire. Even so he lived in the heart of the town, surrounded by the ordinary people. There was no segregation of the squirearchy. He seems simply to have been the leading citizen. By about 2000 B.C. all Crete seems to have been organised on these quasi-democratic lines. At Cnossos we can see the process more clearly. For Cnossos was a city rather than a town and always thickly populated. In the days of its full glory it is probable that it held a population of about 100,000. But its Palace, which started perhaps as a simple house of the type and style as that at Gournia, soon began to grow and to exhibit the main characteristics of what one would immediately classify as a palace. Slowly out of squirearchy, or something closely resembling it, grew a kingship. But the kingship never seems, as far as we can tell, to have acquired the wealth and predominance of the kingship of Sumer, nor yet the sanctity and rigid control belonging to the king-

ship in Egypt. The Minoan kingship, partly spontaneous in origin, seems also to have been influenced by the Sumerian kingship, but it was a superficial resemblance only. Still less did the Minoans exhibit a tendency to develop an elaborate theocracy. You will search Gournia in vain for the site of a temple, and at Cnossos, even in the days of its greatest wealth, you have to search very hard to find any sanctuary. Those who to-day can wander over the restored buildings of Cnossos, in the Palace that now repeats in its restoration the appearance of the city about the year 1700 B.C., will find no temple of any kind. The few shrines there are small and unostentatious, and designed clearly as buildings destined for ceremonies which had to do not so much with the people as a whole as with the activities of the king. Indeed, it seems probable that the king was also chief priest, perhaps himself hedged with divinity. But it involved religious conceptions which did not control the whole daily life of the people. In Sumer the great *Ziggurat* in each town was the centre of the town and the mountain on the summit of which the gods could descend to earth or from the summit of which the kings could ascend to heaven. The top of the *Ziggurat*, as a learned authority tells us* 'was the point of contact of the god with the earth

* *Mesopotamia*, by Seton Lloyd, p. 66.

and here he would be manifested to his worshippers. This was the "holy of holies".' At Cnossos, and all the other Cretan sites, there is nothing even remotely resembling this central exhibition of an abstract worship. The king in his Cretan palace could be seen and consulted, even if he were a god. He sat in his throne-room open to the world, and his people evidently had direct access to him. Matter-of-fact though the Sumerians were in contrast with the Egyptians, neither was so matter-of-fact as the Minoan. Here, possibly, we see the germ of later Greek democracy. Certainly the Minoans give no indication of being a serf population held down by force by a vast organisation of priests and royalty. In the whole of Minoan art you will find relatively few representations of either gods or priests. Religious symbols there are in abundance, but the representations of gods and their attendants are less in number than the representations of mortal men engaged in their normal daily occupations. There is almost no trace of the wholesale association of animals with religion and religious ceremony so evident in Egypt, nor of the monster-deities common in Sumer. Bulls and serpents appear widespread in Minoan art, but we have only the sketchiest idea of their religious significance. The bull in particular played a proud part in the toreador-like athletic performance of the

Minoans and may not have had any religious symbolism at all. The serpents are adjuncts and not in themselves deities. One main deity alone emerges—a Mother God, the prototype of the Virgin who plays so much deeper a part in modern Mediterranean religion than her Son. Indeed a Minoan worshipper would not feel a complete stranger to-day were he present at an Italian procession of the Virgin or in a Greek church dedicated to the Panaghia. Elements of the ceremony would strike a note that was sympathetic to his ideas: he would feel that he was in an atmosphere that he understood.

This subordination of religion to daily life was something wholly new in the world—a step beyond that stage of fear and magical control from which neither Egypt nor Sumer had escaped, and in which Egypt ultimately became firmly settled. Theocracy and an overwhelming addiction to other-worldly considerations ultimately suffocated all speculation in Egypt. We know nothing at all about Minoan speculation, since, unlike Egypt, Crete has left us no documents of any kind that can be read. But from the general absence of temples and the universal paucity and unobtrusiveness of shrines and sanctuaries we can be certain that Minoans were more absorbed in the life they

lived than in the death that they anticipated. The vagueness of our knowledge of the Minoan belief in an after-life is testimony to the lack of interest taken in speculation on such subjects. For our knowledge is confined to a handful of objects depicting scenes from the other world, the difficulty of whose interpretation itself is an indication of their unusual character. Such representations were not a part of the daily art of the Minoan urban life, while in Sumer every city was crowded with artistic studies of religious scenes, at least in the later stages of Sumerian life.

The Minoans were evidently not a religion-ridden people. As far as it is possible on archaeological evidence to reconstruct their religion, it seems that they were monotheistic, their godhead being female, conceived as the principle of reproduction, that oldest of all Mediterranean and Levantine cults. The Minoan kingship seems to have had some kind of a religious background, and the king to have achieved a measure of divinity. Notwithstanding, he did not live remote from his people, but in the very centre of their city. The hills round the great palace of Cnossos held the countless small houses of the ordinary people. The king's tomb, on the other hand, became, rather like

some royal tombs in Sumer, a religious chapel for the worship of the divine king.

The general character of the religion itself can be made out clearly enough. Few ceremonies and slight paraphernalia show that the daily life was not subordinated to the cults and ordinances of priests. The worship itself was singularly pure and devoid of extravagance. As Sir Arthur Evans has said:

'from the beginning to the end of Minoan Art, amongst all its manifold relics—from its earliest to its latest phase—not one single example has been brought to light of any subject of an indecorous nature.'

This aspect of Minoan religion contrasts strongly with the worship of Aphrodite at Paphos, with the temple-brothels of Sumer and Babylonia, with many of the cults of Egypt and with the Asiatic cults of Attis and Adonis. The Minoans were far too interested in making a success of their organisation of city-life to delve too deeply into mysteries. Their isolation in their island and the slight contact they had with other lands where such cults existed gave them an opportunity to develop their own maritime mode of life.

In their art we can see their outlook almost as well as if we had their literature in our hands. It is a most delicate and refined outlook and the artists exercised

their craft with restraint and discrimination. Minoan art is the first art to be free of any non-artistic control in the history of the world. The artist, for the most part, chose exactly what he wanted, without regard to the orders and conventions of religion or the demands of a monarch. The simple Minoan religion, itself the first free religion in the world, was in effect a universal Nature-worship, with the Mother goddess in the background as the main moving principle. Here too lies the clue to Minoan art, which was the first art since the Palaeolithic Age to be based solely on observation, on simple apprehension unprejudiced by abstract reflection or formalism of hand or mind. The general outlook of the Minoan artist has been well put by an acknowledged expert:

'The Minoan religion was a universal Nature worship. Its sanctuaries were in mountain solitudes, like Buddhist monasteries, but untouched by man: gorges or caves where pure water springs and holy trees are nurtured by the divine element which clothes Cretan valleys in the flowers of Paradise. Spiritual devotion in such surroundings must have led, as in medieval China, to an intimate and emotional understanding of life and beauty in all works of nature. Here too is a reason for the apparent break between these romantic origins and the classical ideas of later Greece.'*

* *Minoan Art* by E. J. Forsdyke, British Academy, 1929.

Yet the later art of Greece inevitably was affected by the naturalistic art that had preceded it in the same region. There was a complete break in the continuity of civilisation between Minoan Crete and Classical Greece, yet the soil had been turned and there remained a fertility that was never wholly lost.

The Minoan world lived on its isolation. At no period in any Minoan township of Crete were massive walls of defence built. The islanders of this small paradise policed their own seas and lived almost to the end unattacked. They had no army and no soldiers beyond a palace guard, probably of Ethiopian mercenaries officered by Cretans. They are the least warlike people in the history of the Old World, for war never came their way until in the end it destroyed them like an unexpected storm. Their whole fragile structure was at last swept away as if it had never existed, and no man learned of their existence until their ruined townships were excavated by patient archaeologists. Their palaces and cities, their strange fairyland of art, their easy life and obvious refinement of outlook were contributions to civilisation which were totally and finally lost when the Minoan world ceased. Only the bare imprint of their footsteps remained for later Greeks to marvel at, and wonder at the makers. Something vague,

some hint of artistic skill, some stray persistence of good craftsmanship, filtered through to the Greeks, but that was all. The Minoans made a triumphant experiment, the triumph of which has only been made evident by discovery. Now that we know what they did we can study the fluctuations of civilisation the more clearly.

In brief, their contributions were few but certain. They showed the world that man could live the good life without the constraint of a theocracy and could select a place for its development which made defensive warfare unnecessary. If you could escape the tides of barbarism that periodically swept down upon the makers of each experiment you could forge ahead. Egypt lived in her almost unassailable river valley; Cretans had the sea round them as an even more potent defender than desert sands. Sumer was protected by neither, and had to fall back on her spearmen and her chariots. But a land where such organised defence was unnecessary benefited by not being forced to segregate large bodies of its citizens for service as instruments of war.

But it was too early for such a brave experiment as this. What killed Crete was the lure of imperial ideas. She started colonising early in the second millennium

B.C. First the nearer islands of the Aegean and then the mainland of Greece tempted her to expansion. At Mycenae and Tiryns and Thebes and Orchomenos, and at a multitude of other places, Minoans set forth to explore the world around them. The barbarous peoples of mainland Greece saw for the first time that away out in the mid-sea was a land of golden cities and luxurious life. The Minoan settlers spread a culture which moved swiftly among these untutored people. The mainlanders, of different race and origins, adopted it with the fervour of the recent proselyte. Cities and palaces sprang up and the coasts of Greece were steeped in Minoan modes of life. Achaeans and others like them moved into the Minoan orbit in the sixteenth and fifteenth centuries B.C., like Visigoths or Burgundians penetrating the Roman world. The delicate structure of Minoan life changed into a slightly barbarised version of the real thing. The Minoan palaces grew up and with them the arts and crafts of the Minoan world, but they were modified by the necessities of a mainland world whose frontiers on the north were undefined. Away in the background was a real barbarism that might descend like a dark cloud on these experimental colonials. And so Mycenaean life grew up, a new version of the old island life, but now

defended solidly by massive walls and vast defences, by troops and armies and by weapons of greater efficiency than any Minoan had invented.

The Minoans in their island had even invented an entirely new mode of writing, simpler perhaps than the Egyptian, but not so convenient as the Sumerian. Minoan palaces could have held poets and historians. But on the mainland the knowledge of writing comes only to decline slowly and ultimately to flicker out altogether.

The Mycenaean world involves a perceptible recession from the Minoan.[18] It is the difference between Gaul of the fifth century A.D. and Rome of the second. Inevitably the centre of Minoan power and culture shifts from the island to the colonial mainland. There is reason to believe that the Mycenaeans effected this change by force. By the organisation of a war-navy or of troopships they seem to have descended upon Crete and sacked the palaces, and ruined once for all the fine flower of the Minoan world. Perhaps it was another agency that produced these results. Some believe that an overwhelming earthquake brought the palaces of Crete tumbling to the ground. Whatever the cause Crete loses her hegemony about 1400 B.C., and henceforth it is the mainland that is predominant. And it

predominates by virtue of the proper organisation of force. After this date the Cretan experiment can be said to have failed finally.

In its turn the Mycenaean world expands into an Empire. Moving eastwards, seeking in the manner of a partly barbarous people, the wealth and glitter of a fabulous Orient, Mycenaean ships bring Mycenaean peoples to Rhodes, Cyprus, and the coasts of Asia Minor and even to the confines of Syria. The ancient world, from the Hittite castles of the interior to the Orontes, and from Sicily in the west to the Egyptian Delta, rings with the doings of these audacious people. Secondary settlements of Mycenaeans with their semi-Minoan mode of life develop in the Levant.

Then, soon after 1200 B.C. the storm breaks. The bleak frontiers of the north have broken. Further north away in south central Europe vast movements of barbarous peoples are forcing other waves of movement south towards the shores of the Mediterranean. Upon those rich cities of the Mycenaean mainland of Greece and, soon after, on the secondary settlements among the islands ending in Crete itself, now descends a horde of armed warriors bent on pillage and destruction. Mycenae the Golden and all its peers fall to fire and the sword and are utterly destroyed. You will still

see the black marks of the flames that licked through the great Lion Gate of Mycenae, and on the citadel of Tiryns. The Minoan experiment has ended in utter disaster. Now for the first time in world-history a complete phase of civilisation is blotted out by immediate catastrophe.

. . . . . .

In the same ruin the Hittite experiment was equally involved. But there is no comparison between the Hittite and the Minoan achievement. The Hittites, a people of Indo-European origins, appear early in the second millennium B.C. and settle in the rich plains and plateaux of central Asia Minor. Their organisation is feudal, like that of early Sumer. A variety of cities is grouped in a confederacy with one predominant chieftain as king of the whole organisation. The Hittite Empire cannot be said to have reached its full development until 1500 B.C. It was based solely upon land power and from the outset based its hope of survival on armies, castles and all the necessary equipment of a warlike people. Within the limits of this military organisation grew up a strange and unusual world. Near the river Halys, not far from the modern capital of Turkey, Angora, was the greatest city of the federation, which the Hittites called Hattosas. From its

excavation comes most of our knowledge of this forgotten empire, for among the ruins were found many thousand tablets of clay on which were written official documents. In effect we now have the history of the empire as recorded in its Foreign Office archives. We hear of the relations between Hittite kings and Egyptian and Babylonian kings, we hear of the aggressions of the Mycenaeans on the south coast of Asia Minor and of doings in Cyprus. The empire was organised into cantons with local governors.

The Hittites elaborated their own special script for writing, a type of hieroglyphic script which as yet has baffled decipherment. It survives on stone inscriptions in the ruins of forts and palaces. But the archives of Hattosas are all written in cuneiform, in various languages, and it is from these that we learn the details of Hittite history. The cuneiform is capable of transliteration. Often the language used is actually Babylonian, and so easily translated. Much is in Hittite itself.

But we find little or nothing that can be classified as literature and not much that is religious. It is mostly plain record of events and as such of inestimable use to the historian.

Hittite art is massive and monumental. It mainly

survives as carving in the native rock or as great figures of men and gods in relief on palace walls.

Of the minor arts and crafts of the Hittite we know all too little. But it is plain that they contributed little to the artistic development of the world. Their artistic conceptions were rugged and fine, but not indicative either of independence or of delicacy of mind. It is mostly a hieratic art, controlled firmly by convention and subservient to religion and monarchy. There is none of the freedom of the Minoan conception, and nothing of the skill and finish of the Egyptian.

The Hittite experiment ignored the sea, and in that limitation was latent the destruction that overcame it. For had the Hittites been able to hold the Dardanelles and the Bosporus against the hordes of European invaders who came swarming over these narrow passages soon after 1200 B.C., their empire would never have passed away. At its height the Hittite world covered most of Asia Minor and part of North Syria, but at no point did the Hittites ever develop the coastline. There were almost no Hittite ports, no Hittite ships and no sea-communications that they controlled. They were the only civilisation that ever developed in the Mediterranean that neglected the sea and its ways. They were the shortest-lived civilisation that ever de-

veloped within sight of the Levant, the Aegean and the Black Sea. These two characteristics seem evidently to be connected.

On the whole this experiment was a poor one. There is almost nothing that the Hittites created that was new at the time of its creation, nothing that had in it the germ of future development. While the Minoans in their art as in their social organisation foreshadowed the developments of Greece and of later civilisations, there is nothing that survived of the Hittite conceptions that ever budded at a later date into a definite contribution to advancement. But they can claim distinction as humane law-makers. A Hittite code of law is remarkable for the absence in it of savage penalties of the type common in the code of Hammurabi. The Hittites seem to have been a European folk who merely took over the forms of Middle Asiatic life without giving them any very new meaning. Their cities were large and prosperous, their lands clearly well governed and their people happy, but here were not the germs of future development.

When disaster came from across the narrow waters, the whole empire fell like a pack of cards. A generation before Mycenae and Thebes and Orchomenos and the other cities of the Minoan-Mycenaean world fell to the

destroyers, the Hittites were overwhelmed by an inroad of vigorous barbarians who were an offshoot of the great movements that were then going on in Europe. Asia Minor was barbarised at once by these people, who were named Moschi and Phrygians, all from the Balkans and south central Europe. Away in the south in Syria Hittite cities like Carchemish still lived on down to the eighth century B.C. solely because they were off the line of the barbarian intrusion. But the Hittite Empire as such had vanished. Its memory survived hardly at all, and the Greeks who later wandered over the massive ruins of its cities and saw its rock-sculptures and its burned palaces had no name to give their makers. There is no trace of the Hittites in Greek legend and history. To their immense cliff-carvings the Greeks attached mythical names of Greek gods and goddesses. The capital city of Hattosas in Cappadocia vanished in a night.

. . . . .

And so at last we come to the end of the first phase of civilisation as an experiment. Here was the first collapse on a widespread scale. The forward movement was checked by a catastrophe so violent and so complete that the ancient world was plunged into chaos. Egypt and Babylonia drew in their horns and shud-

dered. The limits of their government were withdrawn and the coasts of Egypt were raided time and time again by pirates and nomad peoples who had at last taken to the sea for their wanderings. Here was the first Dark Age of the world. The lights that had been lit in the Levant and the Aegean were put out. The long process which I have set forth in this book stopped dead in its path. The brilliant Age of Bronze, in which so much had been attempted and in which so much success had been achieved, ended in confusion and utter barbarism. Two of the attempts survived, but they survived more because of their isolation from the area of ravage than from any inherent qualities which made for survival, which were not equally present in the destroyed cultures. Had they too perished it is probable that the later advances would have been much retarded.

In any case it is impossible to say that from this ruin sufficient was left to make a background for further advance inevitable. For the ruin of the Minoan-Mycenaean world was almost complete, that of the Hittite Empire total and final. In the burnt ruins of Minoan palaces the new barbarians wandered without knowing what they had destroyed. Elements of the old population survived, but there must have been a wide-

spread depopulation. At the same time the catastrophe was nothing compared to what a similar catastrophe would be in our colder and less habitable climate. You can live on the ruins of your home while you build a new one in the Mediterranean without serious discomfort. But in northern regions the calamity of destruction leads always to pestilence and graver ruin. Chaos in a wetter and colder climate is a more serious thing than chaos in the sunny Levant and Aegean.

Here at length is the first great break in human history, when the accumulated stores of knowledge and invention were scattered to the winds by barbarians whose aim was loot and whose intentions were nebulous. The great Dorian invasion of Greece and the islands that probably lasted in all for a hundred years brought in the Age of Iron, and with it an age of darkness so complete that the archaeologists and historians are unable to say what was happening with certainty in any part of Greece between the years 1150 and 850. There was a black-out of human endeavour for at least three hundred years.

## CHAPTER XI

## THE HEBREWS: FAITH WITHOUT WORKS

BASED largely on the civilisation of Egypt and Babylonia a little before this Dark Age and to a large extent during its duration, there had grown up in Palestine a body of moral speculation and monotheistic ideas which present us with the hitherto unique spectacle of a people of great vigour and independence advancing far upon the speculative and imaginative plane and endowed with a profound religious consciousness, but with the material setting in which these activities took place of a most backward kind. The deficiencies of Hebraic social organisation and political thought are in strong contrast to their general spiritual advance. Civilisation has always two dangers confronting it—the first is when its material development strides far ahead of its moral and intellectual endowment, as may perhaps be the case to-day; the second is when its moral and spiritual advance exceeds its material equipment. Both leave it open to disintegrating forces. The civilisation engendered by the first may

fall to external attack or internal sedition, due to disregard of material danger: the second condition may prepare the way for a material crisis which all the intellectual qualities available may not be able to surmount. The Jews have reverted to the nomad state in which they were born, because none of their institutions had strength enough to protect them against their enemies. They fell back upon God, and God repeatedly failed them. The only other acute example of the second case is that of the Maya of Central America who, in the early centuries of our era had built up an almost fantastically elaborate civilisation based on a technical knowledge which belonged to the Neolithic Age. Their astonishing achievement in architecture, their road-making and engineering were accomplished in a community that knew metal only as an ornament, and whose instruments were all of stone and wood. But some grave material crisis befell them which they could not surmount and their whole culture was obliterated in the fourth or fifth century A.D. There is as yet no true explanation for their failure. There is no indication that they were destroyed by a barbaric inroad. It has been surmised that they were in the end unable to cope with the growth of disease or the encroachments of the jungle, or to organise their agri-

culture in a way adequate to feed an increasing population. Whatever the cause, they failed, and their enormous cities were abandoned one by one in a brief and limited period of time. Yet they had learned astronomy as Europe did not know it until the Middle Ages; they were mathematicians and had created a scientific calendar. They had invented a mode of writing and organised a detailed and interesting religion. Probably the growth of a theocracy led largely to their downfall, as it led to stagnation in Egypt.

. . . . .

The importance of the contribution of the earlier Hebrews to later thought is not a topic which I propose to discuss here. But it is clearly a contribution the value of which is very great. Their speculation on motives, human and divine, survived the dark ages which had shrouded the rest of the Levant. That was their contribution to the world. And if their early speculations lack an intellectual background, and at later times have served conveniently as an alternative to independent thought or to true philosophy, yet at least they were better than nothing at all, better than a simple barbaric acceptance of the *staus quo* in things spiritual.

It must not, however, be forgotten that the moral

and theological speculations of Palestine owe an enormous debt to Egypt, Sumer and Babylonia. Not merely their subject-matter but their very ideas were taken from ages preceding their first consciousness as a people. The Hebrews appear first in history in the letters of Tell-el-Amarna, which date from 1400 B.C. We hear in them of Hebrew nomads drifting into Palestine, which was then under Egyptian control, and entering the military service of the Egyptians. We do not hear of them again for two hundred years, when, in an Egyptian hymn of victory of Merenptah, we read:

'Israel is wasted, his seed is not.'

This records their history in the time of the Judges. The Jews at this time were a barbarous and almost savage nomad people with only the most rudimentary social forms. Professor Breasted tells us their story:

'It is evident that some of the Hebrew nomads, after having taken refuge in Egypt in time of famine, were subject to slavery, from which a Hebrew of statesmanlike gifts and notable powers of leadership, who placed himself at their head, delivered them, and thus became the first great Hebrew leader whose name has come down to us. It is important to notice that his name, Moses, was Egyptian.'

The same authority points out how the worship of

Jahveh was derived from that of 'a local volcano god' in Sinai; the 'pillar of fire' and the 'thunders and lightnings and a thick cloud' are volcanic phenomena. Moses persuaded the Hebrews to substitute this single deity for their polytheism. This is the genesis of the god of the Hebrews, who was selected to conform, no doubt, to a monotheistic tendency of the times.

The Book of Proverbs, as Professor Breasted shows, and a large part of the Psalms are based on much older Egyptian literature, while the code exemplified in Deuteronomy is largely based on Hammurabi's code.

Palestine, in short, collected the best she could find, and her leaders made it into a body of thought, morals, reflection and law which comes down to us as the Old Testament. As such a composite body of spiritual speculation and moral assertion it served a section of mankind in the Middle East during the period of chaos that lasted from 1000 to 600 in Asia Minor and Syria and the Levant.

## CHAPTER XII

# GREECE AND ROME: SECURITY AND COLLAPSE

GREECE had achieved some sort of order out of chaos at an earlier date. The Dorian invaders who had settled throughout the length and breadth of the mainland and the archipelago, began to organise early. While at the time of their arrival they had merely camped out in rough huts in the halls and courts of the ruined Mycenaean palaces, by 900 they seem to have established townships and a social order of some complexity. In origin essentially European and in race Indo-European, they had qualities of intelligence and mental quickness seldom achieved by a barbarous people. It will always be a puzzle to decide whether the quick-mindedness of the speaker of Indo-European tongues is due to the admirably intellectual qualities of the language that he used, or whether the language is merely the reflection of qualities of mind which were his natural inheritance. The fact remains that the Greek language is the subtlest and most beautiful yet invented, that it is more flexible

and more capable of dealing with novelty than any known tongue; and that language was very highly developed within a century of the most barbarous destruction of all forms of civilised life in the Mediterranean yet recorded. The paradox is there and will always be inexplicable, that a people of barbarous origin, living on barbarous standards should so early have flowered into the greatest literary masterpiece of the world—Homer. Even if we accept the latest date assigned by some scholars to the composition of the Homeric poems—the early seventh century B.C., yet the proximity of that date to the Dark Ages is sufficiently close to make it remarkable that any language could have achieved such complexity, such subtlety and such beauty after so short a period of settled social conditions. Compared with the literature produced in Egypt or in Sumer after several thousand years of unbroken development, the Homeric poems are the work of a mind of full stature; compared to them the oriental and Egyptian writings are as the stutterings of an ill-taught child. In such phenomena as Homer lies the clue to the astonishing skill and speed with which the Greeks developed all the essentials of civilised life as we know it to-day, and many other aspects of it which we have never yet known or only too recently lost.

The Greeks at the very outset of their history seem

to have dispensed with many of those institutions which were apparent at the beginning of Egypt and Sumer. The Achaean-Mycenaeans had kings whose kingship was by no means absolute and only nominally divine. The Greeks, except at Sparta, had no true kings at all, and at Sparta their kingship was so hedged by internal checks as to be little more than a glorified leadership. Elsewhere their organisation, in so far as glimmerings of it appear in the early period of 1000-800, seems to have been largely democratic. There were princes in many places, but they were never omnipotent. In the colonial regions of Asia Minor princes were soon displaced by merchants and groups of men of enterprise.

I cannot here even attempt to outline the contributions of Greece to civilisation. Still less is it my intention to sketch the history of Greece. The shelves of countless libraries are full of works which tell these stories far better than I can. Greece in effect founded civilisation as we know it to-day. Their contribution has somehow survived all subsequent catastrophe and all intervening accident. The force of their particular contributions to the spiritual advancement of mankind was so great and so dynamic that they have emerged and will continue to emerge from every advent of chaos. Perhaps when all else has perished the Greek

outlook alone will survive. Democracy, individual freedom, social justice, tolerance of opinion, intellectual integrity—these are but a few of their contributions which, even if the Greeks often failed dismally to put them into action, yet were published to the world as ideas of which no land and no age had yet had cognisance. Even Persia, the mortal opponent of the Greek way of life, whose standard of social life was exceedingly high, and where the moral integrity of rulers was on a higher plane than perhaps at any age before or since—at least in the days of Darius—never succeeded in leaving any similar legacy to the world.[14]

After the collapse of civilisation that came with the close of the Bronze Age, Greece performed her chief miracle in forging out an entirely new mode of life which had such fierce vitality that it could never die. The future of the world now must inevitably be acted with the Greek achievement as a drop curtain behind it, against which other scenes will perhaps be enacted, but always in its presence. Greek achievements may cease to be an ideal for humanity, but they will never cease to be known. The mere existence of simple facts is sometimes their chief justification.

With Greece the highest summit of human advance-

ment was reached. But there also were first apparent the elements of retrogression. No doubt there were many earlier instances in the other lands with which I dealt, many even in prehistoric phases of the Stone Age. But they are clearest seen in a world at its best. *Corruptio optimi pessima* is a maxim best explained by saying that in the perfect state elements of discord are the more evident. And this was true of Greece, as the pages of Thucydides show all too clearly; indeed that maxim might well be taken as the motto of that great historian.

The Peloponnesian war, a small and parochial affray by our standards, and to the Greeks involved in it not at first a catastrophe which overhung their daily lives, was nevertheless the first indication of a collapse. But it never developed into a grand catastrophe simply because the Greeks ultimately recovered through their own instinctive vitality, and Alexander the Great emerged to revivify the tottering system with new ideas. Thence Greece merged slowly into Rome, and the Roman Empire with new modifications handed on the Greek way of life to a new people and to new regions. A scholar has stated the case more clearly than I could hope to do:

'Hellenism failed to master the intractable soul of the Orient; but it acquired the capacity for world culture in the attempt. What led the proud Roman conqueror captive was not the aristocratic civilisation of Attic Greece, but the more seductive, accommodating, catholic modification of it that we call Hellenistic.'*

What Alexander the Great forged again out of Hellenic material later turned into the Roman Empire. That great organisation laid further foundations of our advancement which, like the Greek, have immense survival power. If they lack the shining lucidity and humanity of the Greek contributions, yet they have other grounds for causing our admiration and respect. The Roman gifts to posterity, like the Greek, have been all too fully described by others for me to repeat what they are here. My task is to try to find out why they failed, and how they failed, that we may learn from the second great collapse of civilisation—the end of the Roman Empire—why Progress is an intermittent phenomenon and not a continual move forwards.

It is then to the end of the Roman world that I propose now to look, an end that came so gently, yet so irrevocably, that men scarcely noticed it at the time. Collapse may take many forms. The Minoan-Myce-

* Professor W. S. Ferguson in the *Cambridge Ancient History*, Vol. VII, p. 1.

naean world ended in ruin and immediate disaster brought by fire and the sword. But the great Roman Empire flickered slowly to its death without any to stop and say, 'Here is the ruin of civilisation, the end of a golden age.' It passed to its end and the utter collapse of civilisation that ensued came almost as an anticlimax and an aftermath. That is the age that I propose now to consider, that our complacency in our own survival value may be as scant as would that of a Roman have been had he seen the utter ruin that befell his provinces and the black chaos that reigned in that second Dark Age between the years A.D. 500 and 1000.

## CHAPTER XIII

## THE SECOND COLLAPSE OF CIVILISATION

IN THIS long story of mine I am seeking to find out what are those elements of collapse and advance, so that we may the more easily detect them in our present situation to-day. I have attempted to trace the growth of the onward movements that lead to human advancement and to analyse that strange self-repeating phenomenon that we miscall Progress. I must return to the true end of my story—the second great collapse of organised society, the end of the Roman Empire, for, as I have said, there have only been two Dark Ages in the history of man, so far, and it is important to see exactly how both were produced, if we are to derive any help to ourselves in the present state of world affairs.

The facts are simple, their explanation, in the case of the Roman end, so complex as to deter the inquirer. By about A.D. 500 the immense structure of the Empire of Rome had completely ceased to exist. From A.D. 500 to 900 or 1000 was universal confusion in which one

detects only the influences of Byzantium, as likely to recreate a tottering world. Let us examine the way in which the end of Roman Imperial organisation came about. I shall look at two regions where its approaching collapse is well documented—Britain and Gaul.

For Britain we have the unassailable evidence of archæological discovery eked out by occasional historical records. For Gaul we have the unusually satisfactory evidence of a writer who saw the world around him actually crumbling, and recorded what he saw, sometimes consciously, sometimes by chance and accident. It is doubtful if he actually believed the end was coming and that the world was in process of tumbling about his ears. That makes his testimony the more sincere, for if he had truly suspected that the end was there in his own lifetime his facts might have been distorted and his story too highly coloured. Our informant is Sidonius, born in 431 at Lyons in France. He died about 489 at Clermont. It has been said of him that he stands 'like Janus in the field of history,' living the life of the old world that had virtually passed away, yet moving in that new world whose chaos was each year becoming more and more insistent. Gaul at this time was one of the few places left in the Roman Empire that still firmly held the main elements of Roman or-

ganisation. It was as though England had been overrun and almost destroyed while British culture still survived in Australia. In Gaul the general outline of Roman life was still extant, though the heart of Rome was itself almost dead. Sidonius was a typical Roman country-gentleman, of noble birth, with innumerable connections with the great men still left in the tottering Empire. He held at different times almost all the high ranks which a man of his position could hold. His culture and outlook was derived exclusively from Greece and Rome and his education was predominantly Greek. He is for us the epitome of the ancient world of those times. What he has left us is a long series of letters, written over a period of years to various friends and relatives. Most of them are concerned with literature and literary topics. But every now and then he gives in an aside a criticism of the life of his times, of the ways of the new world and of the changes in process. It is an astonishing series of documents, which are the more illuminating since they are written exclusively from the true Roman point of view. And yet, Roman among barbarians, a man of the ancient culture in a world gone utterly awry, he still clings pathetically at times to the belief that things might

right themselves. Like us to-day he cannot believe that the end of civilisation is conceivable.

'Providence,' he says, 'I doubt not, will grant a happy issue to our prayers, and under new blessings of peace we shall look back upon these terrors as mere memories; but those who wish to enjoy security in future must learn caution from the present hour' (IV. vi.).

So we talk to-day. Will the survivors of this age look back as we now look back on poor Sidonius, who was living in the last half-hour of the twenty-fourth hour of the last day of civilisation?

He lives passionately in the past: culture then was drawing in on itself and the recreations of literature and philosophy and religious speculation were the refuge of the rich cultured classes who longed to forget the steady decay of all standards.

'The Roman tongue is long banished from Belgium and the Rhine, but if its splendour has anywhere survived, it is surely with you,' he writes to a good friend. 'Our jurisdiction is fallen into decay along the frontier but while you live and preserve your eloquence, the Latin language stands unshaken. As I return your greeting my heart is glad within me that our vanishing culture has left such traces with you' (IV. xvii.).

To derive comfort that Rome survived only in the amateur versifying and elegant epistolary style of his

friend was more than a mere literary affectation. The facts were so and the comfort was cold.

Yet in many of his letters he describes the exquisite luxuries of the lovely country house that he inhabited near Clermont in southern France. And he gives us an astonishing picture of life going on just as usual, with the threat of destruction hanging over the heads of these blithe and unworried gentry. His description of the libraries, the dining-rooms and baths of these fine villas, of the simple country pastimes, the very luxurious dinner parties and the hunting and exercises of the easy-going gentry, suggests immediate comparison with life in the countryside in eighteenth-century England or in Virginia in the same century. It is the ideal picture of an upper class happily organised, wholly dependent on the lower classes to support it and at the same time utterly and sublimely unaware of those lower classes, their feelings and their interests. They might not exist for all Sidonius tells us, except as another kind of beast of burden. When he does refer at all to his servants he refers to them with profound contempt. This was the Roman way at the close of the Imperial Age.

Yet with all his disregard of circumstances and de-

votion to the easy life of culture, even his literature was at times subject to *force majeure*.

'It is no foolish pride of mine, but this alien dominance that makes my letters so few and far between: do not expect me to speak out. Your own fears, similar to mine, explain the need for silence' (V. xii.).

Here was indeed a grim background to the elegant exchange of literary masterpieces! Here was the Censorship at last, the same Censorship that prevents many a friend outside Germany to-day from writing freely to a friend within the German borders.

'If you can hold out no help in our extremity,' he writes to a bishop, 'seek to obtain of Heaven by your unceasing prayers that though our liberty be doomed, our race at least may live. Provide a land for the exile, prepare a ransom for the captive, make provision for the émigré' (VII. vii.).

Barbarism was at his gates. His words have a strangely modern ring. Since his career as a Roman noble soon became obviously a career without prospects he entered the church, like many another, and himself became an ecclesiastical potentate. He did not willingly do this, as his own words show, but, like his literary interests, the Church was in these times a refuge for those of the old régime, for the useless ornaments of a

half-dead Roman organisation. As so often before, men fled in terror of the unknown to the comforts of the unknowable. In much the same way to-day culture has been driven into itself. Teachers and professors in all free periods of history, as in Athens of the fifth, fourth and third century—indeed to a large extent down to the end of Athenian history—have always taken some share at least in moulding opinion and checking abuses. Now they find life more amenable shut up in the confines of their own libraries, where the outer world regards them as harmless cranks unable fortunately to affect the general course of affairs, which are more satisfactorily run by ruthless men who are not worried by the logical necessity of liberty, justice or freedom of speech, those outworn shibboleths of a pedantic world. Only here and there to-day does the theoretic man find a chance to give his aid to the practical man and so keep alive the spiritual bases of civilisation. In America President Roosevelt saw the advantages of making the theorisers come down to earth and help administration. In France there are politicians of merit who began life as professors. But in England politicians seem to have been politicians from birth, with Personal Advancement as their fairy godmother.

Poor Sidonius withdrew into the shadows of clois-

tered churches—and the shadows there were more obvious than the beams of light. The church had become a mere refuge, not as yet a laboratory for new experiments. It survived simply because its role was passive and it did nothing at all. Sidonius lived, in the very words of his own epitaph:

'. . . tranquil amid the swelling seas of the world.'*

And the world then was so turbulent as to induce Gibbon to the creation of his splendid historical masterpiece which describes a world so like ours to-day that for very shame we no longer turn the pages of Gibbon and can hardly bear to read of a decline so like our own.

It has been said of Sidonius that 'he saw the last sickness and the death of the Roman Empire of the west, and is our principal authority for some of the events which attended its extinction'.† For he had seen the ravages of Attila and watched the wild Teutonic allies fighting for the first time side by side with Rome against the common oriental invader, these allies whose barbarism ultimately killed the empire they were then helping to save. He saw strangely uniformed German princelets strutting in the ancient cities of southern

* Mundi inter tumidas quietus undas.
† O. M. Dalton, *The Letters of Sidonius*, 1915, p. 11.

Gaul, taking over the titles, but nothing else, of Roman administrative posts. He has left us a famous description of a young Frankish prince, Sigismer, who walked in a procession:

'in flame-red mantle, with much glint of ruddy gold, and gleam of snowy tunic, his fair hair, red cheeks and white skin according with the three hues of his equipment. The chiefs and allies who bore him company were dread of aspect, even thus on peace intent; . . . though the business in hand was wedlock, Mars was no whit less prominent in all this pomp than Venus.'

One is reminded of the descriptions in more recent letters from correspondents of the wedding of General Goering in Berlin. Germans seem to have changed little in some respects. Of our own ancestors we also get a glimpse. Saxons, probably from England itself, came his way. Here are his words:

He is writing to a friend whose duty was to guard the northern shores of Gaul against Saxon pirates 'the blue-eyed Saxon, lord of the seas', as he calls him:

'My informant was very positive that you had weighed anchor and in fulfilment of those half-military, half-naval duties of yours, were coasting the western shores on the lookout for curved ships, the ships of the Saxon—to whom shipwrecks are no terror, but only so much training. His

is no mere acquaintance with the perils of the sea: he knows them as he knows himself.'

In the basilicas and forums of Roman cities he now saw skin-clad Teutonic warriors strutting, inheriting the duties and dignities of the Roman officials of the earlier régime, but making duty and dignity alike a farce, and ruling *de facto* by force. But the tragedy was that those who had inherited the traditions of Rome, those who were complete products of Roman method and Roman civilisation either could not or would not do anything to stop the internal decay that provided soil for the new and barbarous growths. Fungus-like, the Burgundian and Visigoth, already faintly civilised under Rome, fastened on to the ancient trunk of the falling Roman tree. In a sense they belonged to it, because they had ceased to be complete barbarians once they had come under its shade. Arriving in the Roman sphere as refugees, they soon became pupils and now were masters, tolerated solely because they afforded to the pure Roman element the only defence against those hordes of unromanised barbarians, like the Goths, who now sought to follow their more fortunate relatives into the rich fields of Roman provinces. All the time the Roman element lived in a fool's paradise. There is dramatic irony to the full in the descriptions

in the letters of Sidonius of his dinner parties with his rich friends, in the accounts of their lovely country houses. Here were these gentry living in the shadow of events which meant their complete extermination. Whether they deliberately shut themselves up in their libraries and their dining-rooms as in the end they shut themselves up in the Church, to escape the coming horrors, we shall never know. But the sickness of Rome had gone too far for them to devise any solution or to rely upon anything but their own personal gallantry, which had been proved in many a disturbance. The astonishing military feats of the Roman general Aetius against Attila had shown that the Roman spirit and genius for warfare of defence had not abated a whit from the time of Julius Caesar. But it was the gallantry of individuals on a sinking ship. Rome was dying for reasons which no one has yet analysed with certainty. The barbarian intrusions were more the consequence than the cause of her sickness. What had happened was that *standards had fallen.* Elements wholly alien to Roman rule and Roman freedom had emerged. In the letters of Sidonius we hear of censorship, of political murder disguised as accident, of bribery and corruption in high places, and even of persecution of the Jews. Sidonius himself is astonishingly

liberal to Jews. In several letters he actually recommends to friends the services of Jews with the prefatory remark that 'Even if the man I send to you is a Jew he is all the same a man of sterling character. . . .' One infers that the lot of the Jews was not a happy one.

. . . . . .

A sterner picture can be drawn of the course of affairs in Britain. Here we have no letters of a Sidonius, but the silent and sinister evidence of unimpeachable archaeological sources. Roman Britain was one of the most comfortable and delightful of all the Roman provinces, once the Roman had subdued all opposition and disturbance, and had persuaded the Britons into co-operation. The Great Wall was built in the North to keep the Caledonians and such barbarians like bears in Mappin Terraces. Britain became one of the granaries of the Empire, and by the third century of our era was a place where one could live in comfort and happiness and some luxury. The standard of public security was greater than at any period in British history before the middle nineteenth century. Proof of this is found in the fact that the Romano-British upper class of the countryside lived happily in their villas, isolated sometimes but always undefended, never at-

tacked or destroyed. The moated farms and defended houses of the Middle Ages stand in sharp contrast to this rural felicity. There is no single instance of any Roman villa being looted or destroyed by violence before the end of the Roman occupation. The great roads climbed the hills and vales and, in between their network, lived the farmers and the owners of estates in comfort and happiness. Travel round Britain and you will see in what quiet and secluded spots they lived, often many miles from the nearest Roman road, but always protected and able to rely on the peace of the countryside. Round the big houses clustered the villages and townships. From A.D. 100 to A.D. 400 all Britain except in the north was as pleasant and peaceful a countryside as it is to-day. Never since have we had a Pax Britannica of this kind that lasted for the vast space of three hundred years! But by A.D. 500 it had all vanished and the country had reverted to a condition which it had, perhaps, never seen before. There was no longer a trace of public safety, no houses of size, dwindling townships and all the villas and most of the Roman cities burnt, abandoned, looted and left the habitation of ghosts. The destroyers fled into their fastnesses and dared not look at the corpses of those cities they had killed. There is hardly a site where

the destroyer settled again. Often they crept back to their ancient strongholds from which Roman might had displaced them. At Roman Dorchester in Dorset they seem to have returned once more to the frowning fortress of Maiden Castle and revived old customs, old religions, and an ancient pre-Roman mode of life. The same happened at the great city of Verulam. All this and more the archaeologist can tell us with undisputed accumulation of fact.

Here was retrogression indeed! And how did it all come about? The British problem was as different from the Gallic as are the problems that face England and France to-day. They bear a disastrous similarity in their differences. The Gauls were faced with a vast stream of barbarians who poured over the banks of the Rhine seeking the wealth and easy income of the fertile fields of central and southern France. The Britons were faced by the terrors of isolation which are sometimes the ultimate defence, sometimes the cause of collapse in an island commonwealth. While the sea protected, the loss of Roman sea-power opened the coasts of Britain to attacks from pirates on all sides. While it saved Britain from the devastation of the Goths, it laid her open to the horrors of starvation. One vague story reaches us of a famine in western

Britain relieved by a single benefactor who sent grain-ships to assist: this in what had once been an Imperial Granary! Yet twice in earlier times, when Gaul was facing the invasions and island Britain secure, Britain had herself sent corn to Gaul, once in 357 and once in 361.

The trouble in Britain began with coastal raids, which at first were easily beaten back by the Count of the Saxon shore and the other generals appointed for coast defence. Then came the pressing need for troops to defend the very heart of the empire itself, unassailable Rome, against Alaric and his Visigoths. The famous Twentieth Legion left Britain in 401 after a sojourn in the land of no less than 358 years. It never returned, and its ultimate fate is unknown. It is probable that no other army in the world has contained regiments whose regimental records went back for so long a time in continual service, nor any army a unit whose service was mainly devoted to the maintenance of peace.

But as yet Britain was safe and there was no hint of panic. What troops were left, aided by local territorial forces of native troops, repelled all invasion. But by 429 or 430 Roman power finally failed, and there was no certain military defence by Rome. Yet the is-

land was still prosperous and at peace for another ten years. And by now all Roman troops had gone. Still a semblance of Roman Britain survived, but we see the defenders compromising with fate. Along the Great Wall of Hadrian and in the frontier cities you will see the gateways of fortresses half built up, the better to defend them with reduced forces: everywhere is this compromise with fate evident. Communication with Italy and the coming and going of individual officials were still possible, but there the link with the Empire ceased. It was a tenuous and nominal connection. Then from all sides the tide flowed in, Saxons from the south and east, Irish and Scots from north and west. This ancient land, after its long Pax Britannica was now a mere jungle wherein was neither safety nor culture nor the intricate structure of Greco-Roman civilisation that it had absorbed.

Let us sketch a picture of these times. The Romano-British landowner was faintly aware that things had slightly changed, but no more; just as to-day we see the world changing under our eyes, though at a greater speed. 'I hear that there has been a little trouble up in the north,' says our Romano-British squire to his friend one evening at dinner. 'Those damned savages from Caledonia have broken through. In my father's

time the garrison troops on the North Frontier Wall would have wiped them out in no time. But nowadays they are sending so many troops to Rome that you can't expect the wretched local levies to fight so well. Really, you and I will have to build defences round our houses if this sort of thing goes on.' He laughs genially over his wine, and his friend laughs with him, for neither believes that anything can conceivably happen to shake a world so completely organised for peace. After all, had not he and his ancestors lived in the same house on the same estate for over three hundred years? Not a single thing had disturbed their peace and there had been no external war and no invasion to remind them of danger. Here was civilisation at last, they had thought, and a steady advance of human progress. Yet they had noticed fewer and fewer troops in the shining armour of Rome about on the great roads, and more of the ill-equipped clumsy and unsoldierly local levies. One felt rather out of touch with the larger world. 'I am sorry,' says our landed gentleman to his friend, 'that all I can offer you to drink is this atrocious stuff made in northern Gaul and miscalled wine! My wine merchant tells me that he can no longer get shipments of real Falernian and Samian: either they have had a few bad seasons with their vines or the ship-merchants have sent their ships on a new

venture and find these long-distance cargoes not worth while. And *how* expensive these Roman silks are nowadays. Why, in my father's time you could buy a dinner cloak for a quarter of what one pays now, and even then get better colour and better material!' And our friend did not know, for no one had told him, that the outside world had almost perished, that every land was drawing into itself in fear and that oversea trade was a luxury that piracy and poverty had almost destroyed. Each land was living by itself and for itself—as we have learned to live to-day. Trade had ceased to circulate, for barriers were being put up to impede it, not the artificial barriers that we create nowadays for our own destruction, but the more evident barriers of non-productivity and piracy. It is hard enough for us to-day fully to realise those barriers, and it was much harder then for our Roman squires to grasp the full meaning of the sudden cessation of their simple luxuries. The roadways of the world were being closed one by one, and its waterways frozen up. But they never knew it.

I will quote an account of the western Roman world at the close of the fourth century and the beginning of the fifth, written by a historian who knew more of Roman Britain than any other:*

* Haverfield: *The Roman Occupation of Britain*, p. 266.

'Though others (Roman Villas) in Britain remained occupied till about 385 or even later, the rural districts, it is plain, began then to be no longer safe. The discovery of occasional fortified farms is eloquent of the conditions that prevailed: some houses were burned by marauding bands and some forsaken by their owners. . . . The twilight was already deepening. Darkness soon fell. The respite secured by the victories of Theodosius was shortlived. . . . A host, composed mainly of Vandals, crossed the frozen Rhine on foot at Mainz and burst like a whirlwind on peaceful provinces, bringing red ruin in its train. In 410 Rome itself was sacked. When the storm cleared Britain was found to be cut off from Rome.'

Let us look again at our British landowner a few years later. 'I hear,' he says at another dinner party in his lovely villa to a similar friend, 'that Paulinus in Gloucestershire is selling his place, or at least, trying to, and going to live in Gaul. But he tells me that the agents have been trying now for three years to find a buyer and there is no one. Paulinus tells me that, all the same, he will go and leave the estate in the agents' hands.' Three years later the mansion of Paulinus, neglected and abandoned, begins to fall into ruin. The slates work loose on the roof and the rain gets in. There is no enemy to building like the soft, steady rainfall of the English countryside. Then one day our landowner, rather more lonely now that

Paulinus and other neighbours have gone, is walking round his rich fields and pastures when, suddenly out of the blue, a band of completely savage Picts who have roamed all the way south from Scotland without any body of troops or police intercepting them, appears from the forest edge. They kill him, burn his villa and drive off his cattle and horses. They fly off to the fastnesses where are their kinsmen. One by one the lonely villas go down in flame and smoke and the inhabitants of Britain draw in to the great cities. The coasts are no longer defended and invaders land when and as they wish. In a watchtower on the cliffs near Whitby in Yorkshire, built at the end of the fourth century, the archaeologists a few years ago found patent evidence of what had occurred. I quote their report:*

'Within the tower lay the skeleton of a short, thick-set man, fallen across the smouldering fire of an open hearth, probably after having been stabbed in the back. Another skeleton, that of a taller man, lay also face downwards near the feet of the first. Beneath him was the skeleton of a large and powerful dog, its head against the man's throat, its paws across his shoulders.'

Other bodies were found, thrown into a well near by. Here is evidence of what had happened at the end

* *Archaeological Journal*, London, 1932, p. 210.

of the fourth century on the north-east coast of Britain. The particular case illustrates the universal conditions. Darkness had indeed fallen with the suddenness of an equatorial night. The book of human advancement was closed and many hundred years were to pass before it would be opened again—almost at the beginning.[15]

Once the countryside was unsafe the population dwindled, took to indiscriminate banditry or fled to the towns. The towns themselves dwindled in size as the richer citizens fled or were killed. Frontier towns like Wroxeter in Shropshire, living under the shadow of the Welsh mountains, were wiped out by immediate catastrophe. The Welshmen descended by night from their hills, penetrated the weak defences and massacred the population. The ruins were life ghost-haunted and abandoned, sacked and looted. Towns in more settled regions, and distant from the menace of frontier tribesmen only half subdued, took longer to die, but their death came no less certainly. Of St. Albans, the Roman Verulamium, the excavators have this story to tell:*

'Hereabouts lay fourth-century Verulamium, a Verulamium whose population had declined apparently in num-

* *Verulamium*, by R. E. M. and T. V. Wheeler, Society of Antiquaries, 1936.

bers and certainly in wealth and social standards until it had dwindled to a sort of nucleated slum. The nucleus was the market-place and the buildings which lay around it. Beyond the nucleus stretched the old residential suburbs, now largely deserted and tumbling. The picture is one which is becoming increasingly familiar to students of the north-western provinces of the Empire.'

It is convenient, if I may be allowed this term, to watch at our leisure the way in which a great civilisation crumbles. We have seen the crash that overtook the palaces and cities and imperial structure of the Minoans and Mycenaeans. Now we look at the collapse of the civilisation that succeeded those enterprising Bronze Age pioneers. In the ruins of Britain and Gaul and Italy we see the material break-up of all that Greece and Rome had rebuilt after the first grand venture. Out of the utter ruin of Crete and Mycenae and all that those civilisations meant, the Greeks rebuilt, using here and there a half-forgotten fragment of more ancient timber, but for the most part cutting down new wood and fashioning a structure which, for skill, beauty and strength has never been equalled.

After the fall of Rome and its Empire the world waited. Chaos and the confusion of uncertain experiment followed for a long age. Over the once smiling lands savage hordes roamed at will and all standards

were gone. Then slowly out of the confusion a few great minds and men of character forged a new mode of life, which at first was wholly built of the shattered timbers and abandoned walls of the old mode of life. Here was no renaissance of Greek genius, no flash of imagination, no brilliant new synthesis. It was a laborious rebuilding, a Herculean reconstruction, into which went the combined genius of semi-barbaric races of different strains, infused by the still living spirit of Greek and Roman institutions, Roman law, freedom and justice, however ill-understood or misconstrued. From that barbarous reconsideration of an ancient world came the world that we know and the institutions that we enjoy.

## CHAPTER XIV

## BYZANTIUM: THE SURVIVING REFUGE

ONE beacon alone remained in all that darkness, destined to survive and kindle civilisation once again from its embers—Byzantium. There behind unassailable walls, later Greeks defended like their life the civilisation that they had created. Once more man was defending his creations as did the ancient Sumerian in his city states, when the barbarians came down from the hills. But this time it was a whole world that attacked him, and the culture that he defended was virtually concentrated, at least in the earlier centuries of its life, in one city only.[16]

The story of the defence of Byzantium against an outer world of barbarism that continuously beat against its walls, and was as continuously driven back into the darkness, is the greatest epic of the history of human development. But as an epic it has never been handled by literary men and survives to us only as a concatenation of dates and events recorded usually in isolation and not as a continuous story. Within the

circuit of those narrow walls was preserved a flame which ultimately lighted the whole of the western world again—long before the Renaissance—so that some form of settled life and the elements of civilisation were widespread in Europe in the west by as early as the twelfth century. But outside those walls, for the first few centuries after the final collapse of Rome and Roman culture in and about A.D. 500, were mostly chaos and the presages of the coming Dark Age. How dark was that outer world, and how tenaciously Byzantium defended her inheritance is shown by the nature of that great fortress of Byzantium and the imminence of catastrophe that perpetually beset it.

No sooner was it firmly established as the citadel of a new world, as the rallying point for defeated humanity, than the outer world descended upon it to obliterate its optimism. Hardly had Justinian solidly rebuilt its institutions behind the mighty walls that his predecessor Theodosius had made, than the envious forces of disruption burst upon it. In A.D. 616 came the first great siege by Chosroes the Persian—symbolic of the first wave of that continuous pressure of east upon west that revived after the first triumphant defeat of Attila and his Huns by Rome. In 616 Persians and Avars come again to the assault and are again re-

pulsed. In 675 the Arabs besiege the city from the sea and again they come by sea and land in 717. Three desperate sieges in a century was an indication of how the disruptive forces inherent in the development of humanity had got the upper hand and were trying to snuff out the one small centre of true civilisation left.

In 813 the Bulgarians under King Crum launch an attack, fail but retire to the outskirts of the city, devastating the countryside leaving the small island of Byzantium more dependent upon its internal organisations than ever. In 864 come the Russians, a new enemy, but their uncouth fleet of transports is destroyed: yet in 904 they come again. Twice later, in 936 and 1043 the Russians attack and twice more they are beaten.

Here are simple facts which we should read with imagination. If we can reconstruct the kind of life that saw perpetual siege as part of its basis, if we can imagine the mentality of the citizens, always on the alert, always on the watch for disaster, we can explain many of the barbaric customs and much of the tenseness of early Byzantine life. The atmosphere of life in France and England in those desperate years of war 1917 and 1918, if we recall it, gives us some hint of the psychology of Byzantium over a period of centuries. No won-

der literature languished; no wonder philosophy failed. The imminence of assault by barbaric hordes from every quarter of the globe, Arabs and Persians from Asia, Bulgarians from the west and Russians from the north, was hardly likely to be conducive to peace of mind. The only peace for the citizen of Constantinople was to be found in his churches, his liturgies and his ceremonies. Man fled once more, as once in Egypt, for comfort to the unknowable in order to defeat the unknown. Religion thrived as never before, because it comforted. Intellectual comforts are poor nutriment to men facing the horrors of immediate war. So to-day, the long-drawn threat of international war has led to the growth of wholly unintellectual forms of religion, strange fervours of irrational enthusiasm, organised by the unintellectual for the weak-minded. Strange sectaries, Buchmanites, Anglo-Israelites, countless other cults, now batten not so much on stupidity pure and simple as on a lack of desire to use the human intellect for its proper purposes. And that weakness comes of fear. So the Byzantines fled to the comforts of religion. But in all other respects their essential Greek intellectual gifts enabled them to overcome these continual assaults. Their superb military organisation, which depended more

on an intelligent use of proper forces rather than upon a blind overcoming of the enemy by superiority in numbers, was a weapon superior to any invented by the Romans.[17] In almost every engagement it was an inferior force of Byzantines that defeated the enemy. But they won by sheer cleverness and by the aid of inventions and tactical tricks which were the result of purely intellectual gifts. The single invention of Greek Fire beat off many deadly assaults. It must rank as one of the first great individual and single inventions by which mankind staved off destruction. It was not a discovery made originally for peaceful ends, later prostituted into the service of war. It was devised to defy assault and siege and had no other purpose. With it Greeks beat off the Arabs in 675 and 717 by burning their fleet and throwing consternation into their ranks by this new and abominable invention. In 936 again it drove the Russians off. On many other occasions great and small, this simple device saved the city. To the best of our knowledge it was an invention rather different from modern explosives, though it can be classed as the first weapon of that type to be made. Greek Fire seems to have been a preparation based on a secret formula which produced a self-igniting mix-

ture of petroleum and quicklime.* The secret was grimly kept for centuries and the enemies of Byzantium never learned it until they had virtually given up hope of capturing the stubborn fortress. Then it was too late, since the Byzantines had learned the technique of defeating assault too well.

When ultimately Byzantium fell to the Turks in 1453, it fell to an enemy who had themselves perfected a new device which Byzantium was not constructed to repel—artillery. The Turks were the first artillerymen in the world to use artillery as a major weapon and as a means of attacking cities on a grand scale. The Byzantine walls of Theodosius, built a thousand years before, were devised without even the faintest conception of the power of explosive-propelled missiles. The Turkish guns breached them, and not all the Greek Fire and Greek heroism could repel the assault that followed.

But Byzantium fell after her task had been done. She had spread the light of civilisation, and of a culture based on all the lessons that Greece and Rome had taught, far into the western world. Saxon England, Europe of Charlemagne and the subsequent Carolingian Empire, were all based on what Byzantium had

* See Forbes's *History of Bitumen*, 1936.

sent. Her fall to the Turks came too late to arrest the growing seedlings of a renewed civilisation. For, once again, the real element of progressive advance had survived. Turkish domination spread disaster and retarded many regions near the Turkish centres of power, but there still remained the solid core of the western world which held fast and ultimately triumphed against the Orient. Had Byzantium fallen to the Arabs in their early assaults of the seventh and eighth centuries I have no doubt at all that most of western Europe would have become Moslem, and that, as one of the consequences, neither should I have written this book nor my readers have read it. Greece and Rome, surviving under the outward shapes and forms of Christianity, succeeded in holding the fort, and when the fort fell it had fulfilled its great task to the utmost.

## CHAPTER XV

## EPILOGUE: THE OLD WORLD AND THE NEW

BUT now again the end is in sight, unless we take measures to prevent its coming. Blithely we consider the possibility of vast cities being ruined by flame and violence. The mere fact that we are prepared even for a moment to consider such destructions is eloquent of the distance we have gone on the pathways of Retrogression. To consider London or Paris in ruins is a reversion itself to barbarism. To say that it may yet happen is an admission of defeat. Yet we are not living in a world fringed vaguely by barbarism, the extent of which we cannot gauge. There are no longer Dorians, Picts and Scots and Avars and Vandals away over the horizon. The possibilities of external barbaric intrusion are almost nil. A few misguided cranks still affect to believe in a Red Terror, or a Yellow Peril or a Black Menace or in some variegated combination of the whole bunch. These are neither real nor immediate dangers. There are no hungry waiting hordes on our doorstep. The barbarism is here and now, with us, in-

side the gates all the time. The symptoms are strangely similar to those which accompanied the collapse of Rome. Freedom of speech, tolerance and justice have completely vanished in all lands except in France, Britain and America and in some of the politically powerless smaller states. The first step on this decline was the World War. With the dead who perished in that cataclysm there perished also the major part of international morality, which neither the eloquence of the high-minded nor the organisation of the League of Nations can do anything to atone for. The raging afflictions that the war engendered have now reached their pathological crisis. The success of Fascism was at first a merely parochial affair in which the unfortunate citizens of the countries afflicted had to suffer. But now the disease is at its height and full crisis. Every country, however peacefully inclined, is drawn into the orbit of the barbarous tendencies of Fascist systems, just as, slowly, Roman provinces were absorbed by the intrusion of barbarism into their peaceful organisation. Fascism means the lowering of all standards. It means the destruction of almost everything that Greece and Rome devised and which the Middle Ages laboriously sought to recover. Fascism produces as positive advantages only unification and efficiency.

There were advantages which, as our study has shown, were already present in the animal world and in the earliest stages of human development. But with them then, there were also present the other factors of morality and social security from which all that Greece and Rome invented was derivative. Fascism is an attempt not only to retrace the footsteps of humanity far back on its path, but to jettison even those civilising elements which are to be found in the very earliest stages of human advance. The deliberate segregation of men into groups between which communication is deliberately denied is a fantastic move back to the most primitive conditions. The deliberate turning of all inventions, however pacific in origin, to purposes of the destruction of all who oppose Fascist and Totalitarian advance, is a sign of decay already long observable, but now definitely blatant in its self-assertion.

I have traced the rise of human aspirations as far back as the eye can reach. My evidence is almost exclusively material, interpreted as all material evidence must be, by processes of inference and deduction. Nothing made by man is meaningless: everything that left his hand tells us of the mind that guided the hand. By the aid of archaeological discovery we can record the stages of human advancement over a period of

years which makes our few millennia of recorded and written history a mere sheet of paper lying in a library. The prospect when we turn to our own times is not one which would bring comfort or provide inspiration for the coming generation. In our own lifetime it may well be that we shall dwell in some 'nucleated slum' that once was London or New York. To me it seems that civilisation is not on the brink of collapse, but that it has already some years ago collapsed, much as it might be said that the Roman world had collapsed by 400 even if it did not vanish for another century. Like our Roman landowner, we feel that things are changing and that they are not what they were 'in our fathers' time' but we do not dream that the worst has already happened. I wonder exactly how long it will take us to awake to the fact that before our very eyes the world we lived in in our youth has passed away, and with it the main props of civilisation. I wonder what can be salved from the wreck. At all costs let us avoid the easy optimism of 'it will all come right in the end', for the end is now so very imminent. All that remains is to build a New Byzantium within whose walls civilisation can remake itself. Perhaps that new Byzantium is to be found in Western Europe, in the lands of Britain and France, Holland, Belgium and the

Scandinavian countries. There, with America as a background, may grow up again the new life of man. But the walls of defence we build round our new city must be strong and well defended. Perhaps we are once more holding the banks of the Rhine against the Goths and the Vandals. History is led by Geography through all time, and the repetitions of history are not due to man's tedious habit of repeating himself so much as to the fact that the surface of the earth controls all our movements into ways which are not of our own devising. We may control the air, and the sea-depths, but it is the earth god who has the last laugh. For you cannot have aeroplanes without aerodromes, nor submarines without harbours. Each of the two great failures of civilisation, which I have described, were prefaced by a long period of fall in standards of life and thought. The last phases of the Mycenaean world show an increase of violence, and a spread of Mycenaean power based on force and imperialism. As far as we can judge the evidence, there is a decline of the spiritual aspects of life. Illiteracy is on the increase and the gentle world of Minoan culture has been replaced by a more military and forceful mode of life. Every Mycenaean city is powerfully defended, and disciplined troops are a normal part of

warfare. The world then was accustoming itself to the idea of war as a normal part of daily life. Raiders well-organised and powerfully conducted, roamed the seas. Then the catastrophe arrived. Barbarism overwhelmed even this finely defended empire, and the end came.

I am not attempting to seek for cause and effect. It is hard to disentangle them. Still less am I trying to discern a pattern in history which at uncertain intervals repeats itself. There is no pattern in history except that forced upon it by geographical conditions. Because a state of affairs developed in one age there is not the smallest reason why it should of necessity repeat itself after a fixed interval in another. All I have sought to demonstrate is that when in a civilised region certain conditions arise, certain consequences may develop from these conditions. It does not follow that they will and the eternal ingenuity of man can always make a valiant effort to ensure that other consequences shall develop from those conditions. Where the conditions are so varied and complex they cannot rank as causes which lead to certain effects. There, and there only, lies hope for optimism. But the fact that the fall of the Bronze Age world and the fall of the Graeco-Roman world were prefaced by almost exactly similar conditions, and that those conditions seem to have re-

curred to-day, suggests that the catastrophe may ensue. And this suggestion is the more sinister in view of the fact that we are all now talking of coming catastrophes as glibly and calmly as one talks of a coming winter. The creation of such an atmosphere is the creation of the conditions requisite for the catastrophe. Every country and every politician is to-day basing policy on the assumption of catastrophe. That, surely, is the best way to make the catastrophe universal. Such is the complexity of modern urban life that any general catastrophe will be far more ruinous to civilisation than catastrophes of the past. The greater the structure the greater the fall.

We do not have to look far to see the evidence for the lowering of standards of life and behaviour. However much improvement there may be, at least in Britain, in material conditions of life, I can see no sign anywhere of an improvement of the spiritual conditions. We are obsessed by the imminence of calamity just as were the Romans in the fifth century. 'Perhaps the worst feature,' says the editor of the letters of Sidonius, 'of the situation was the general suspense: the uncertainty when the blow would fall paralysed such public life as remained.' That private houses should to-day be equipped with gas-proof rooms and

that citizens should be to-day instructed in the measures to be taken to avert destruction by gas discharged by enemies in the air is a strange footnote to our latest chapter of human development. That men of education can be found who will not only justify the use of such weapons and their antidotes on high moral grounds is an even more astonishing proof of the universal degradation of standards. Yet in our own country, where the decay of standards is least evident, some strange distorted brain has been persuaded to produce the following apologia, which may well serve as the epitaph of all modern civilisation:

'An attack by gas is another form of the effect of environment to secure the survival of the fittest and the elimination of decadent and unworthy persons and races.'

This statement, which might well be forgiven if one assumed that it had emanated from the mouth of Mussolini was, in fact, published in a British medical periodical in August, 1935.

*Part III*

# *OUR COMPLACENT WORLD*

## CHAPTER XVI

## PRE-WAR AND POST-WAR LIFE

LOOKING back on the past, searching, as we have done, for those brief periods of advance and improvement in the conditions of life as well as in the spiritual growth of mankind, how can we explain the present situation? How are we to account for that atmosphere of catastrophe, the imminent doom, the black and almost hopeless era that opens out as that New Age in which our sons and daughters are to live or die? Does our long examination of the career of man enable us to draw any useful conclusions that yet may serve to bring mankind back to sanity—or at least to the conviction that knowledge of a disease is one step to its cure? What in brief is happening to-day?

I am neither doctor nor prophet; but I am convinced that a survey, not merely of the closely recorded past, but of that greater past with which we have dealt, may show us how the chemistry of human development produces reactions from time to time that are due to the associations of the same constituents.

We must first recall in memory that almost halcyon period of 1890-1914. What remains most in the mind is a conviction that in those years there existed in the world something strangely akin to Internationalism. The fires of 1870 had dimmed and Europe was living in a state of equipoise in which national frontiers were convenient limits of modes of life, and national institutions merely variants on the one general theme of a normal European life. Perhaps Europe has never, since the time of the Roman Empire, lived so unified a life or developed so general a harmony of existence. I do not pretend for a moment that European civilisation was at an advanced stage, or that there were not the grossest barbarisms existing in various corners of Europe. Russia and Turkey alone provided a theme that broke the general harmony. The Concert of the Powers served as the International policeman who periodically intervened when the barbarism made itself too offensive to European tastes. Across the Atlantic, America and Canada set the world an example, scarcely needed, of frontiers that no one violated and no one defended. As fortresses in Europe became obsolescent no one built new ones, hoping for the day when the forts would be mere curiosities, and the universal respect for frontiers achieved. If there was anything at all that

we can describe as Nationalism it consisted of a friendly exhibition of local ability contrasted with the ability of your neighbours. There was no more need for these rivalries to lead to bitterness or violence than the rivalries between two village flower-shows. I may, perhaps, exaggerate the calm and civilisation of these halcyon days, but my general account is true. Passports were considered by most travellers as a sign of timidity or else as a joke. No one needed them throughout the length and breadth of Europe, except for the barbarous regions of Russia and Turkey. It was considered slightly degrading to carry one, and certainly no frontier official ever dreamed of asking for a passport. In other words, Europe lived so uniform a life that there was no need for the traveller to prove his identity. If he did carry a passport he found that it was, in fact, no proof of identity at all! On one occasion when I was challenged to show that the passport was mine I was quite unable to prove it, for it bore no photograph of the owner!

So with the problem of the exchanges. One's pound sterling was worth more or less the same in most of the larger countries and was slightly more productive of foreign currencies in the smaller and less efficient lands. But the differences were insignificant.

The outbreak of the Boer War, I suppose, brought the first infection of Nationalism. England gave an exhibition under the guidance of Mr. Kipling, of the most ludicrous form of self-admiration and self-advertisement. Proof of the growth of general civilisation in Europe was found in the almost universal reaction of disgust to our antics which greeted our performance. European lands showed their essential decency by treating us as pariahs in a well-kept garden.

Possibly this first inoculation served to prevent us from having later accessions of the distemper. But the virus began to germinate elsewhere. A second explosion of outraged European decency, in which we, now the cured patient, took part with gusto and enthusiasm, occurred shortly before the War when the famous incident of Zabern shocked the world. Two Prussian officers beat civilians with their swords for not raising their hats to the majesty of Prussia. We all shuddered, not from fear, but in disgust that such barbarisms should exist in a civilised world. But still there was nothing that could even remotely compare with what we call 'Nationalism' to-day. Only in Ireland was there something of the kind, but it was a growth much more complex and far less malignant than the Italian and German Nationalism of to-day. In Ireland it was more

a practical movement with a definite end in sight than a fanatical creed of self-exhibition. Even the rivalries of British and German navies and of French and German armies was little more than a boasting-competition put to practical application.

Then the War broke upon us and the flags appeared. The frontiers closed like iron vices round their countries and every land forged its own special ring of steel. Slowly the venomous germ of Nationalism grew. But, looking back, I am astonished to find how slowly even after 1914 it spread. I have often pondered on its monstrous growth and I rather think that it happened in this way.

As rivalries grew, there were rivalries not only between combatants but between allies on both sides. As the need for co-operation grew in each camp the efficient ally came to scorn the inefficient. French generals disbelieved in the British Army. British soldiers laughed at the French. Both together jeered at Italians and all three laughed at Portuguese. Germans learned to loathe the feeble Austrian, and Turks combined with Magyars, on a basis of common blood, to scorn the Teuton. One strange growth appeared in 1916 and vanished almost as soon as it was born, known as the Pan-Turanian movement. It represented a kind of

spiritual and racial alliance between Bulgarians, Magyars and Turks with a visionary ambition of ultimately making a Turanian state out of tracts of Asia and Europe. The plan has long been forgotten.

From these rivalries grew up the desire to show that your particular nation was better, braver and more efficient than that of your neighbours. From that conviction grew up the far more serious demand that, if possible, all those of the same race and mode of life should, when the time came for treaties and new frontiers, all live within the same confines happily for ever afterwards. Hints of this kind of demand had appeared well before 1914, as when the first Jugoslav conception was born. But it never became a reality until the jostlings of war had thrown together the different nations so that each could learn how superior it was to the other. And so when President Wilson first propounded the theory of self-determination of nations, he was merely crystallising a tendency that had steadily grown until the need for stating it became acutely specific. To prove that the growth was malignant we have only to observe that Nationalism as seen to-day in Germany and Italy (and now steadily growing in Russia) is its direct descendant. When Czechoslovakia was born and Jugoslavia made, when the Rumanian

frontiers were at last drawn to include all Rumanians, there on the firm basis of a theory was laid the pedestal which so soon was to hold that monstrous idol, the Hydra of Nationalism. As the new states grew, the older drew sustenance from them. The cry of Rumania for the Rumanians soon became that of Germany for the Germans and France for the French. The Concert of Europe became a group of individual brass-bands. The frontiers that the War had closed were kept closed. So closed indeed were some that no newspapers, currency or produce of the neighbour across the way was allowed through even in infinitesimal quantities. I remember in 1923 having my Hungarian newspaper taken by the Jugoslav official at the frontier and the Jugoslav paper taken from me on the return trip, so as to make infallibly sure that I knew of nothing that went on across that invisible line that divided two fields.

Now what is this strange splitting-up process? this deliberate isolation from imaginary contagion? Is it the process by which, as we saw, the alder beavers of a herd, in a season of want and drought, break away from the herd and live a separate life, so that the species can continue? or is it that most venomous of all the diseases of humanity, the splitting up of a homogeneous

whole into warring parts, the *stasis* of the Greek city-state, that forced Alexander the Great to invent the International Hellenism of his mighty concept of world empire? Indeed it is the *stasis*, the rivalry within a unit of certain of its elements, the warring of healthy and unhealthy germs within the blood-stream, the great disease of humanity that always reduces it to impotence and decay. Homogeneous Europe was, by Self-determination, made into an aggregation of warring units. What Europe could still be just barely survives to-day in the internationalism of scholarship. Congresses in science, literature and the arts can still be held in which nation counts for nothing at all. Archaeology is a case in point: is it conceivable that the French or the Spaniards could seriously maintain at an international congress that their particular brands of Palaeolithic implements were more lovely and more efficient simply because they were French or Spanish? or are the Greek vases found in Italy more beautiful because Italy is now a stronger and richer land than Greece? Is the astronomy of Russia better astronomy because it is Russian, or the mathematical genius of France higher because it occurs within the French frontier? The germ of what European life

*should* be lingers on in the world of learning and science, but in no other.

The centrifugal movement of states away from a common ideal of life is the modern disaster. For therein lies the beginning of collapse. In the disintegration of mutual organisation man is working out his own destruction. Internationalism, that was so promising a growth in 1930 is a dead weed in 1937.

Not content with the bacillus of Nationalism, those who feed it and promote its growth now see within the national states they have founded, a further growth of *stasis*. As one bacillus thrives so its opponent develops. The conflict of Fascism and Communism within national states is a normal development in the process of disintegration. The suppuration that ensues takes the form of demagogues and dictators. Whichever bacillus is predominant does not matter: a fresh bacillus appears. Within any Fascist state is the germ of another of a different kind. All the purges of a Hitler will not extirpate it. Whether Spanish rebels or Spanish socialists are supreme, in each party are the elements of its destruction.

Perhaps the germ first germinated in Greece. Although the Greeks had extirpated it within a century of its maximum growth, and although it never grew

at all in Rome in any virulent way, this process of internal subdivision throve luxuriantly when Christianity resolved itself into various sects and forms at the close of the Middle Ages. One might have thought that the disease had run its course by the eighteenth century. It has grown again. The political conflicts of to-day are the counterpart of the religious wars of the sixteenth and seventeenth centuries. But they are now on the grand and universal scale.

What is most likely of all the actions of modern states to hasten the general breakdown of civilisation is that when one state develops *stasis* and is torn into two divisions, as Spain has been, external states, not content with their own isolation, should foster one side or the other in the warring state. The dangers of Fascism or Communism in themselves are not profound. Civilisation may survive the onsets of either. But that each or one should strive to split up other states into these two component and conflicting parts will lead to universal ruin. Man, who has perpetually sought co-operative measures of advance, is now advocating everything disruptive that he can find. And that is barbarism.

For, let us make no mistake, barbarism, the ancient and perpetual foe of progress, is here among us, no

longer on the outskirts. Barbarism thrives on barbarous conditions, and those conditions were generated during the World War. They began as a mere falling of standards and have continued as a perpetuation of degraded ideals graced as new standards. What now passes as Justice and Freedom in a Fascist state is nothing more than a label affixed to a corpse. We are living, like Sidonius, in an age when caricatures of the main elements of civilisation masquerade before deluded peoples as a New Age, a Renaissance of the nations.

I have not intended to hold up the pre-1914 era as one of perfection. It was not. But the rulers of those days saw that social amelioration could come by a slow and steady process of legislation, and much legislation in all countries was put on foot. Now the panacea of all ills is said by the Dictators to be found in the regeneration of a people by War. They are using that ancient defence of civilisation as a prevention of internal collapse. Instead of using War to prevent barbaric intrusions or barbaric internal dissensions, the barbarians themselves have decided that War is to cure them of their barbarism! Lunacy could devise nothing more fantastic.

Out of the darkness comes the small voice of pacifism, which maintains the only sane view that can be held

theoretically. True pacifism believes that if you offer nothing but goodwill and honesty to all comers, your example is bound *in the long run* to produce similar effects in your opponents. So, if you offer war to all who threaten or oppose, you will get war in return and your opponent will persist in a warlike outlook. Both the pacifist and the militarist are right in theory and practice. Canada and America offer the standard example for all time of the results of offering goodwill and peace across a mighty frontier. Here is Pacifism in action. So the Franco-German frontier offers to all time an example of what happens if you and your neighbour exchange only warlike communications. The world can choose which it can have of the two theories. But I am not stating an alternative for the future, so much as looking to see if the possibility of taking such profound decisions is now feasible. I fear that it is too late, and that the growth of barbarism is excluding the chance of making any such civilised gesture as to offer nothing but peace to an opponent and nothing but friendship to a neighbour. At no time yet in the history of the world has the pacifist theory been put into practice except in America, and there unconsciously.

These, then, as I see them, are the disruptive ele-

ments in our mode of life, I cannot call it civilisation, to-day. A steadily increasing disintegration of all the co-operative efforts of mankind, and an uprush of true barbarism. That increased co-operation in the human species was the first essential after the calamity of the World War was immediately recognised by the formation of the League of Nations. That, as quickly, mankind was eager to sabotage even this humble effort was shown by the defalcation of the sponsor of the movement, the United States, and the exclusion by the existing members of certain states, as yet not wholly approved. The unhappy League failed almost at birth to justify itself and grow to maturity through the inner wickedness of man, still, apparently, ignorant that to survive he must combine. How far accidental disintegration of the League has developed into deliberate disintegration recent history shows all too clearly. Without examining the reasons or asking whether they were just and reasonable, we can remember all too clearly the departure of Germany from the League and the threats and chicanery of Italy. America departed from the venture through stupidity, Germany and Japan through malice, and Italy remains only because she believes she can do more damage inside the League than outside.

With such a spectacle of human lack of co-operation before us, is it surprising if we wonder that the end of our civilisation may be near? This modern attempt to bring all human state-organisations together for the betterment of the world has been equalled in the past only by the world-empire of Alexander, which, had he lived, might have laid the foundations of a world-state in which no hint of Nationalism existed. Rome almost succeeded in achieving this aim, but failed for reasons which remain wholly obscure. The fall of the Roman world, as we have seen, was accompanied by many of the phenomena we see to-day. Nationalism, it is true, did not appear, but dictators and usurpers did. As the end approached rival emperors and generals fought for supremacy in different areas. The centrifugal tendency was in full evidence. Provinces split up and broke off, and even if, at the end, it was the proud boast of the Roman citizen that he could traverse the Empire from Asia to Britain and from Africa to Germany by virtue of his citizenship, he soon found that his area of travel was delimited and his passport was of no avail.

It is clear enough, then, that subdivision of large inhabited areas into racial or political sections creates the conditions requisite for further subdivision. The ab-

sence of *stasis* both in the Hellenistic Empire of Alexander and his successors was concomitant with its greatest prosperity and civilisation, and that the Hellenistic world was at a very high pitch of civilisation no one will dispute. But the successors of Alexander soon lost his international outlook, and began the dismemberment of what Alexander had formed. The steady decline was arrested by the Roman organisation, and the second great attempt in the history of the world of a unified civilisation of mankind began. This in turn faded, and by the fourth century A.D. the old process of splitting up and the isolation of areas had set in. The idea of the unification of human organisation, whether as an association of independent states federally, or as a centralised control of local governments is the perpetual ambition of man, and the ambition is as perpetually thwarted. Its breakdown comes, apparently, from that perverse movement known as *stasis*, a process of infinite subdivision which makes all federal or confederate control impossible. That the federal idea is ancient is proved by the mode of life of the Sumerian city-states, where the central control of a group of communities shifted from place to place according to the presence here or there of a capable administrator. It is proved also by the nature of the Hit-

tite Empire, which was similar, and there is reason to think that the Minoan and Mycenaean worlds were organised on much the same lines. Nor is there evidence of any widespread growth of *stasis* in any of these civilisations. They came to their end owing to the attacks of external barbarism rather than of internal. To-day it is internal barbarism that is the danger. The terrific attempts of modern Fascist movements to unify their peoples, is done with the express purpose of using the unit so formed for the disruption of non-Fascist areas. Such unification is the most pernicious form of what was originally in purpose a beneficent tendency. It is the extreme form of *stasis*, an attempt to break down that general unity of mankind which is alone its salvation. No European Federation, or World-State is even conceivable as long as Fascist ideas persist. The only ancient example of anything akin to Fascist organisation is provided by Egypt. Facile parallels are dangerous, but the almost complete suppression of the individual and the regimentation of the population to conform to the desires of a potentate and a ruling caste, led in Egypt to a general sterility which ended in a static condition where further advances of civilisation were impossible. Egypt achieved much and created nothing. There is no known Egyptian invention pre-

served to us, no body of speculation and little science beyond that which resulted from practical needs. Italy and Germany to-day proceed along the same road. Russia, with its more flexible organisation, is at least making great contributions to science for its own sake.

For Russians have realised, what few other peoples have yet grasped, that the artisan class is the class from which springs ultimately all possibility of invention and discovery. The man who is in daily contact with his machine or his factory work, his engines and his laboratories, can, out of pure routine, make minor discoveries which facilitate larger invention. The professor and the theorist in turn can discover the larger implications of the artisan's work. The two together make the ideal basis for further advance. The history of the motor-car and the aeroplane is the history of a mechanism which was constantly improved by the genius and skill of artisans who detected the need for minor improvements. These improvements in turn led to larger discoveries. Russia has grasped the importance of subsidising the theorist and giving an important status to the man who uses his hands and eyes —the artisan. The term 'proletariat' in effect means, not a mass of uninstructed unskilled labourers, but a

population of small specialists. Sumer in the Bronze Age consisted of similar people similarly divided. From the patient agriculturist and metallurgist came inventions which were adopted and adapted by theorists. So in every age of advance.

## CHAPTER XVII

## THE PERVERSION OF SCIENCE

HOW slowly civilisation has advanced since the days of Sumer can be gauged by the number of beneficent inventions which have occurred since. In the words of a scientist:*

'Between 3000 B.C. and A.D. 1400 there were probably only four really important inventions, namely, the general use of iron, paved roads, voting and religious intolerance. Perhaps I should have added coinage and long-distance water-supply.'

He adds that Babylonian astronomy was very highly advanced, and that Kidinnu, the last great Babylonian astronomer, who lived about 400 B.C., was a great deal more accurate in the numbers that he used in predicting eclipses than any of his successors until about fifty years ago. His knowledge had been forgotten in the interval. In Assyria the average educated man knew the multiplication table: 'The same level was not reached in England until the late seventeenth century.

* Professor J. B. S. Haldane, *The Inequality of Man*, p. 49.

Pepys was grown up when he learned his multiplication table.'

Of these inventions listed by Professor Haldane the general use of iron, which became an effective medium of invention only in late Greek and Roman times, has resulted in the main practical inventions of to-day, most of all in the development of communications. That alone might have brought about the World-State. Paved roads laid the way to universal organisation under the Roman Empire, but with the fall of Roman culture this invention lapsed until the eighteenth century.[18] Only to-day at last have the possibilities of paved roads been realised again. Voting, perhaps the greatest invention of the Greeks, led to the growth of those ideas of justice and freedom which were until recently the basis of all modern civilisation. Religious intolerance, by the suppression of religious *stasis*, is held by Professor Haldane to have contributed to general unification. This may be true, but unfortunately it conflicted with the ideas of freedom and justice generated by the invention of voting. The one invention killed the other and Professor Haldane would, no doubt, not press his paradox too far!

But none of these inventions compare in their contributions to progress with the invention of agriculture

and the domestication of plants and animals. Second only to this is the invention of writing, which allows for unification by the propagation of ideas. The subsidiary invention of printing merely made the process more intensive.

Just as mankind is now bent on destroying the co-operative principle, so he has an innate tendency to prostitute all of his inventions. Of all the ingenious inventions of the human brain perhaps agriculture alone cannot be turned to the destruction of the human species. The provision of scientific water-supply, first invented on the grand scale by Sennacherib, perfected by Greeks and Romans, and then lost for centuries and only reinvented in the last century, can also be classed as one of the almost inviolable inventions. But a water-supply can be deliberately poisoned or contaminated, while agriculture by no criminal ingenuity can be perverted.

Iron has given us all our most brilliant modern inventions of a machine age. But it has also given us the maximum power of destruction that the human race possesses. In the Battle of the Somme in 1916, 75,000 tons of iron shell were launched against the Germans by the British army. In the Battle of Arras in 1917, 109,800 tons were hurled at the enemy, and

in the ten weeks August 18th to October 27th, 1918, the British Army fired 53,100 tons weekly.* It would be tedious to catalogue the innocent inventions which have been turned to purposes of destruction. Last of all, the aeroplane is now hovering over the future of the world like an evil vulture waiting to destroy all that the patient ingenuity of man has built up. But, while we look to the skies in apprehension, other inventions are being turned to our destruction without our detecting it. The invention of writing and its subsidiary printing, has now been turned to the deliberate production of untruth in a way which makes earlier attempts at its perversion pale.[19] The discovery of 'Propaganda' during the War laid bare possibilities which have now at last been fully exploited. The most recent invention of all, the Wireless, has now fallen into the same net.[20] Broadcasting which, with the printed news-sheet, might well have proved the most beneficent of all the subsidiary inventions derived from writing, can now make millions of people believe what is known to its authors to be untrue. No doubt the cure is latent in the invention, and counter-propaganda can be made effective. But the effect of two totally different versions being issued of a single event

* *The Times*, Sept. 24, 1936.

merely results in the emphasis of a division. One group of people will decide that one version is correct, another will become the advocate of the opposite.[21] And so here again appears disunity and *stasis*, actually created at high pressure and with fantastic ease by the most modern inventions, whose original aim and proper use was to unify by the promotion of truth. Here is an instrument of destruction far more potent and far more deadly than aeroplanes or guns or shells. One broadcasting station in an hour of crisis, controlled by an evil genius, can create more chaos in an organised community than a hundred air-raids. It is always the imponderables that count. The Wireless is an engine potential for the propagation of fear, rich with possibilities for the division of human communities and for their destruction by internal conflict. It has already been so used by Italy and Germany and Russia. No more rapid perversion of an invention has hitherto been recorded in human history. Man has achieved a triumph of evil in realising that so beneficent an instrument could become so potent a weapon.

Can we still believe that this is an age of progress when the disruptive forces are so quick to act and so evil in intention towards the future of the human race?

It is almost a commonplace of dinner-table conver-

sation that the next war will shatter civilisation. Sidonius at his dinner-table at least had the acumen to see that something was seriously wrong with his world. We, in greater simplicity, prefer to think that a future war will merely bruise a fine flower of civilisation. In fact, it will shake off to the ground an already seedless husk. We are too proud of our achievements, and too ignorant of their possibilities.

But have we considered what our end will be if the threatened war does come? We are given lurid tales of bombardment from the air and universal ruin and chaos that freeze our blood, but we believe that, after it is all over, we will rebuild the ruins again. Alas, we no longer live in cities like Rome and Athens that could survive a score of sackings. The process of unification that had developed so successfully up to 1914 had produced a common type of European and American city which depended for its existence on the assumption that no one would attack it in warfare. Just as European fortresses were fading into obsolescence and the whole science of fortress-construction had virtually died, so the cities were built on the assumption that whatever war there would be in the future would be in open country. And so the whole organisation of cities was built up on a system of centralisation. Gas,

electricity and water were generated in one spot and diffused to many. Transport had its centres and depots, food supplies their central clearing houses. Just as the first invention of the Neolithic village led to a certain primitive centralisation of supply in the form of market places, wells and granaries, so the modern city is merely an elaboration of that theme on the grand scale. Both conceptions were based on the supposed immunity from war of the inhabited area. But abandon the organisation of one great city for a few weeks and you will have chaos. Even the Romans found that their external aqueducts that fed their city were the first objective of invaders. But they had built Rome in the firm conviction that no enemy could ever reach the plains that held the aqueducts. Wiser Byzantium faced a world of enemies with her water-supply immured in a hundred vast cisterns within the walls, thus enabling a million citizens to defy siege for long months.

But any modern city will be uninhabitable in a few weeks if, owing to municipal or financial chaos, its organisation lapses. This is no idle conjecture, for I have seen one great city, Constantinople, derelict and helpless, not through siege or attack, but from the collapse of internal control. In 1918 when the Allied troops entered the city after the Turkish armistice, they

found a city that was dead. The Turkish government had just ceased to function. The electrical supply had almost failed and was intermittent. Tramways did not work and abandoned trams littered the roads. There was no railway service, no street cleaning and a police force which had largely become bandit, living on blackmail from citizens in lieu of pay. Corpses lay at street corners and in side lanes, dead horses were everywhere, with no organisation to remove them. Drains did not work and water was unsafe. All this was the result of only about three weeks' abandonment by the civil authorities of their duties. It was not hastened by bombardment or attack. The city was just handed over.

It needs little imagination to see the effect on a modern city of a similar abandonment plus the horrors of attack and bombardment. The forces of crime would be the first in the field after the first collapse. From them would be recruited the only force available. In brief time the gangster element might well become the government—in its own interests.

Rome and Athens might be ruined in a night, but they were rebuilt in a day. Here were none of the nerve centres, none of the centralised finance that one crisis might destroy. The ruined houses were small and

easily remade, and, above all, the climate was not such as to make temporary habitation almost impossible. In the warm climate of the Mediterranean destruction by man is helped but little by Nature. In our Northern climate damp and frost play swift havoc with a damaged city. Imagine the city of London left a whole winter untended and unkept. It would be in six months a ruinous place and in two years an almost complete ruin. Imagine New York attempting to survive the rigours of an American winter without preparation. Ten feet of unswept snow in the streets and frost of twenty degrees below zero would soon bring its towers toppling to the ground. While Rome would stand for a year New York would be unrecognisable in a few months. The ruin that befell Roman London or Roman Verulam must have been a swift one. As these cities degenerated into slums their walls and houses fell under the impact of those deadliest of all enemies, damp and rain. And the English countryside after the departure of the Romans must have reverted to a condition that it had not seen since the Bronze Age. Its well-kept valleys became impassable swamps and its rivers marshes. A year's neglect of fields and river drainage can speedily make a morass out of a fine rural area. Were sluices and river banks neglected the gentle Eng-

lish river valleys would be mile-wide swamps in a few months. Man would retreat to the hills again and to the old chalk downs, and build his Bronze Age huts once more from the debris of the abandoned towns.

All this is nightmare, but of a kind which men have seen and lived from age to age. Our complacency tells us that it cannot happen. But we are complacent simply because we have hitherto built for peace. Like the Agrigentines of old we 'build as though we would live for ever, and live as if we should die to-morrow'.

But I notice a change. We see the evil ahead and you can now buy a fine house complete with gas-chamber and concrete cellar. The next style of building, unless I am mistaken, will be the private villa with a concrete core, devised skilfully for immediate conversion by the military into a machine-gun nest. Every building will be conceived with a view to the imminent catastrophe, all our architecture will be devised for use in attack or defence, our suburban villas specially constructed for scientific street-fighting.[22] We are back in the Middle Ages, with its fortified mansions, drawbridges and moats, because another Middle Age, or rather a Dark Age, seems upon us. Is there no way out except through defence and attack by war? Is the genius of Man so obscured that the World-State is

now the wildest of dreams? Is mankind slipping downhill once again towards another pause in progress?

If I have been able to show that progress is intermittent and that retrogression is a movement as recurrent as progress, I shall at least have dispelled a little easy optimism. It is wiser to face facts and then seek to adapt them for our survival than to believe in an impossible future. To promote reflection was the main purpose of this book, for from reflection comes new invention and fresh hope.

## CHAPTER XVIII

## THE FUTURE

HOPE, to be effective, must be practical. There is one region where there exists hope that before the catastrophe occurs there may yet develop some form of co-operation from which may arise a purged nationalism and a real feeling of the unity of mankind. The Philosopher-King of Plato has never occurred and may never occur. If he occurs in the future he may well rapidly degenerate into just another dictator. Did not the one hope of Plato, his chosen Philosopher-King, his own pupil, Dionysius of Syracuse, so swiftly become a bloody tyrant that the very conception was made ridiculous?

But behind the Platonic conception is a reality that Plato would be the first to see to-day. As I have said a little earlier, the frontiers of the National states are steel rings that enclose them. One class of person alone not only breaks the ring, but is almost fulsomely welcomed into the charmed circle—the despised student, researcher, professor, the non-political worker in sci-

ence, the arts and literature. He alone to-day has a world-passport. Still congresses of the learned meet at any capital and are accorded freedom of action and privileges undreamed of for the ordinary citizen. He is welcomed with open arms even in the most reactionary countries. From his congresses of art and his conventions of science, from his public lectures in foreign capitals and from the perpetual interchange of learning may arise in the long run the small spark, smaller than the first spark struck from flint, that will light the embers of reasonable intercourse. Political and military rivalry will then fade before the international rivalry of achievement. The pooling of knowledge, which to-day is a virtual fact, may result in the pooling of action. The despised 'intellectual' will emerge as the instructor of the world-state.

The term 'intellectual' still, in the minds of dictators and politicians, has a connotation that suggests a rebel and a crank. Indeed the development of the meaning of that strange noun during the last half-century should be a diverting study for a linguist. I suspect that its use, as popularised in dictatorial countries to serve as a term of abuse, in fact originates in Tsarist Russia, when any man with even a modicum of education automatically turned revolutionary. For he could

hardly do otherwise when he learned to appreciate the lunacies of such a form of government. So to be educated meant to be a rebel, to be learned meant to be a leader of rebels, to be a technical expert in science or philosophy meant to be a potential organiser of a vast revolt. To-day in lands where the mode of government is even as lunatic as the Tsarist, intelligence of the ordinary kind indicates revolt against absurdities and unreason.[23] Every potential 'intellectual' is a potential opponent of the 'unintellectual' government. Hitlers and Mussolinis fear like the plague all who can analyse their Bedlam philosophy into its constituent lunacies. The famous tag of Tacitus that 'It is a failing of the human race to hate those whom you have harmed' is as true to-day as always. And with that hate is fear. The first witch-doctor must have hated and feared the first intelligent man who made fun of his conjuring tricks. Probably he hastened to have him 'eliminated'. To-day we are back again in those witch-doctor days. But you cannot eliminate the intelligent men of to-day because they are too numerous. And if you eliminate them in your own land as the Germans have done, you will still fail to eliminate those of foreign lands who come to you as visitors. As long as international congresses and conferences in the 'intel-

lectual' pursuits are possible, as long as mathematicians and scientists in one land still freely exchange knowledge with those of another land, the dictators must still shiver in their unsteady shoes.

There lies the slender hope for humanity. To increase intellectual and cultural interests and to promote international rivalry in the achievements of knowledge cannot fail in the end to bring lunacy toppling to the ground, unless lunacy first brings the material world to catastrophe.

Side by side with the so-called 'intellectuals' is that silent and powerful class of men, the artisans of the world. In between the two classes are those who neither create nor invent, nor wish for international collaboration, the conservators of the world as it is. Their very title bespeaks their quality of museum curators! They wish to conserve the mode of life in which they have been brought up because it is to their profit. They have no conception of the larger unity of mankind, of the creed of those who know that they must keep cohesion to survive. They look, like the cattle, at the grass under their bellies. That there will always be such a class is inevitable as long as there is no widespread education. The fact that the average Englishman whose education was provided by the State was

until 1918 considered to be fully educated and equipped for the world at the age of twelve is sufficiently indicative of the fact that even the politically minded Briton has had little chance to see the larger intentions of his existence or to consider mankind as a whole, himself a member. To-day we now launch our children at the ripe age of fourteen into a confused world, assuming our citizens to be fully equipped!

Were we still engaged in the rigours of a fight against Nature, were we still living in caves from which our children had to emerge to help combat the mammoth and the sabre-toothed tiger, as soon as they were able to wield an axe, it would be comprehensible that we should launch our boys and girls into life at the age of puberty. Otherwise I can see no explanation for such suicidal folly. That any prospective citizen should be considered ready for his State, a finished product at fourteen, seems to me to suggest that our conception of the State still belongs to the Palaeolithic Age.

From the mass of people who receive such an education, there is naturally a vast number who are content with the little world that they inhabit, because they are content with an apparent safety. It is from such as these that none of the elements of advance and

invention come. It is from these that are recruited the rank and file of the Fascist armies, even the despicable stage army of the British Fascists. For those who can do nothing new, whose standard of intelligence forbids reflection or discovery or the delights of intellectual curiosity, who are utterly content with things as they are, there is no possible future except in the ranks of those who, in the modern manner, decide by force that things as they are must be kept for ever as they are. The instruments of those anti-human and anti-social movements that are conveniently here classified as Fascist, are found in such men. They are the corner-boys of the world. In the days when civilisation was making its first great strides, they would have been maintained by society in the humbler services, for cleaning the stables of the experimental agriculturalists, for digging the clay for the potters, for all the odd jobs where intelligence was unnecessary. To-day they wear coloured shirts and march to the music of their masters, who have for them sanctified the principle of retrogression into a rule of life. Individual enterprise and invention, individual criticism and discovery, they are told, must be rigorously suppressed in the interests of the Sacred State, the Church and the Party. And when they ask what new thing the State and the

Church and the Party are giving to humanity, what great advance such a State can make in the course of human progress, the answer comes from the mouths of guns and the muzzles of rifles. For that is all that the New State can give.

In such a world we live to-day. Democracy would unite mankind according to its own wishes, each separate region to live as it wills. Communism would unite humanity on a basis of uniformity, perhaps forcible uniformity. Both seek conditions in which Progress is possible. But Fascism provides no hope for mankind for the future, for it has nothing at all to offer. It is a scaling down of all human effort to an intention that is anti-social and non-progressive. It unites one region in order to divide and conquer the rest. It disregards all those factors which have in the past contributed to human advancement. It is a movement and a creed which is the direct opposite of the great civilising experiment of the Roman Empire, for it cannot conceive the varied races of the world united with the one object of peace and progress. Roman rulers and Roman emperors were born of strange blood and came from all parts of the habitable globe. African, Thracian, Gallic and Syrian blood flowed in the veins of Roman princes. 'Racial purity', if it had been con-

sidered at all by a Roman, would have struck him as the conception of a half-wit. The 'Gleichschaltung' of the Germans would have appeared to him as an attempt to kill at birth all possibility of genius and all hope of invention and criticism in the race. The Greek would have gazed in astonishment at the vision of whole peoples deliberately reducing their intelligence to the level of the lowest, and slowing down the possibilities of progress to the pace of the least progressive. For never before in history have we seen the strange spectacle of the human race devising elaborate methods for its own suicide and consciously preparing the road for a reversion to a more primitive condition.

. . . . .

I have heard it suggested that one of the great contributions to human advancement was the discovery, with the dawn of Christianity, of pity. The application of pity in human affairs has been held, and rightly, to have helped to ameliorate conditions of life, the administration of justice and the conduct of society. At times and on occasions this is true. But the one Christian virtue that was never thought of in antiquity, before Jesus proclaimed its use and its beauty, has been stultified by the mechanical inventions of mankind. Pity is only operative when you can realise the objects

of your compassion. But in modern life pity is almost eliminated by the mode of our existence. A thousand people can be starved by a brief movement on a financial market, and no one will realise the need for pity of them. A financial crisis can create intense suffering and no one will know except the sufferers what need they have of pity. In warfare one man with a machine-gun can destroy a thousand and feel no pity because he hardly sees his victims. Guns never, or rarely, see those they annihilate. But man is still civilised enough to sicken of death in hand-to-hand combat, and the pity that he was taught inevitably wells up when he is asked to bayonet his fellow-man in cold blood. Science, by dividing opponents in war to greater distances has allowed human pity to escape in that 'No-Man's-Land'. The one great contribution to morality of Christianity is now obsolete.

I have attempted to describe the conditions in past ages when progress could be recognised and I have given a brief picture of those periods of the past when humanity fell back in its advance, or stopped. I cannot pretend to have expounded to my readers all the factors of progress and retrogression. We do not know them all, and the best we can do is to examine our own age in the light of the immense past of human devel-

opment, and make comparisons and contrasts. The period of recorded history tells us so little and is so small a paragraph from the total history of man that I have drawn but little from it. The great strides occurred before history was fully recorded, and the period during which the written record is available seems to me to be a period of pause and hesitation. As I have said above, almost nothing has occurred to force the pace of Progress during the last two thousand years, and much has occurred to hint at the appearance of an age of Retrogression. Consciousness of the position alone may contribute to stopping the downward trend of modern civilisation.

## NOTES

1. Perhaps the Greek conception of Progress in so far as they had one at all, was enshrined in their use of that strange word ἀρετή. Every material thing to a Greek had its ἀρετή; the ἀρετή of a knife was to cut well, and that of a chair was to be comfortable and hold the human frame. So each occupation had its ἀρετή. A cobbler or a potter was a good potter or cobbler because of it. So the term implied something like 'proper functioning' or, more simply, 'excellence'. If it were possible to find the ἀρετή of unspecialised man, of man as such, the simple human, then you would have the clue to progress and there would be no further faltering and hesitation. Man would forge ahead until he became perfect, just as the good potter forges ahead with his labour until he achieves perfection in his profession. But the Greeks found man considerably more complex than they had suspected, and no Greek ever decided precisely what the ἀρετή of man was. Their whole history largely consisted of a valiant attempt to find out—and they almost succeeded. Christianity was no more successful.

2. The origin of the use and production of fire is a problem which has, oddly enough, provoked almost no research. It is certain that the makers of eoliths, the earliest and most primitive flint implements, must inevitably have struck sparks from the flint; for the mode of manufacture of all the earliest flint implements was by percussion and not by pressure. Implements manufactured by pressure hardly appear before that part of the Cave period called the Mousterian. By percussion the maker of implements would first see fire in its most difficult and least utilisable form. Indeed it is improbable that anyone at first connected flint-sparks with fire such as forest-fire, which was a common enough phenomenon in the earliest Stone Age when the climate was tropical. The genius who first connected sparks with fire can be compared with that first primitive man who associated copulation with childbirth for the first time; this stage of inferential mental development has not yet been reached by a good many savage tribes to-day. Probably someone struck flints near dried moss, and so found a natural tinder. The archaeological facts, which are worth a good deal more than all this *a priori* reasoning, tell us that someone else, fairly early, discovered the superior spark-producing properties of iron pyrites. This mineral, found in glittering

nodules and crystals, would attract any child or savage. Some such brought pieces of it into a cave, where they have since been discovered in association with Palaeolithic remains. They were almost certainly there used for striking fire. Even so, the flint-and-tinder stage of development (from which we have so very recently emerged) did not solve the problem of providing lasting light, except by means of a constantly fed fire. It was not long, however, before some inventive Palaeolithic man found that animal oils will feed a wick. Stone lamps obviously constructed to hold liquid fuel have been found in Palaeolithic caves.

A further argument for the existence of lamps in the Cave period, or at least for the use of long-lasting torches, is provided by the fact that many of the cave-paintings described in Chapter IV, are situated in the innermost recesses of caves where no natural light at all could reach them in daytime. The painting of these pictures must have occupied a considerable time and required artificial light for their achievement. Spark—tinder—lamp—these were large steps in human invention. One need not be surprised that it took several thousand years to achieve.

The problem as a whole would well repay further investigation. It is quite certain that the earliest type

of man known, *Homo Sinanthropus,* whose remains were found at Chou Kou Tien, near Pekin in 1929, used fire, for traces of fire were found in association with his implements. See R. R. Schmidt: *The Dawn of the Human Mind,* p. 43 (1936), and J. B. S. Haldane: *The Inequality of Man,* p. 58. The first recognisable human evolved was soon at work making inventions. Prometheus was not, after all, a beautiful Greek hero. He resembled a gorilla.

3. The discovery in America from time to time of alleged skeletal remains of man of immense antiquity, at least equivalent in age to Palaeolithic man in Europe, has, in nearly every recorded case, been proved to be either a deliberate fake, made to deceive the innocent archaeologist, or else a genuine error. There remains one borderline case only.

In 1838, when Boucher de Perthes startled the world by the discovery in France of Palaeolithic implements great stimulus was given to intelligent geologists the world over to seek for similar evidence. In 1839 a certain Dr. Albert C. Koch declared that he had found in Gasconade County, Missouri, the bones of *Mastodon Giganteus,* together with stone spearheads of human manufacture. The implements turned out to be of Red Indian origin. But they came from the same soil as the

bones of the extinct mammal. Careless observation had failed to note the difference of levels.

The next 'discovery', equally a consequence of the activity of Boucher de Perthes, was made in California, in Calaveras County, in 1866. In February of that year the owner of a mine found a human skull at a very great depth. He notified the State geologist of his find. It was then announced that the skull was that of a prehistoric man. A long controversy followed and pamphleteering developed. Among others, Bret Harte contributed a derisory account of the affair in his story 'The Society upon the Stanislaus'. The skull proved to be that of an ancient Indian, deliberately placed in the mine by jokers.

Another skull, found in New Jersey, proved ultimately to be that of a Hessian mercenary of George III.

But there are found in various parts of the States certain implements, deeply buried in glacial gravel. They are of a type which is neither Indian nor European. They are thought to be the remains of an immediately post-glacial man who must have crossed over from Asia by way of the ice-sheet itself and worked his way down to the less frozen regions. These implements have been found in authentic circumstances and have been subjected to scientific study.

They constitute the best claim to a very remote human occupation which North America can make.

There remains still one more claim which is set forth in a recent publication, *Pleistocene Man in Minnesota,* by Albert E. Jenks, 1936. This is the most recent.

4. It is generally agreed among scientists that there were four glacial periods, of which the second and third were the most severe. In these two the ice-sheet extended over the whole of what is now Ireland and Britain to a point just south of the Midlands. It covered the whole of the Scandinavian countries and the Baltic lands, and Germany, as far as Poland and the Ukraine, its southern edge being roughly along a line extending from Brussels to Kiev. There was, of course, no English Channel, Britain being then a part of the European continent. The Mediterranean was a lake, hemmed in by land-bridges across from Africa to Gibraltar and to Sicily. The Black Sea was also a lake.

The maker of eoliths lived in a warm period after the ice had retreated from its first advance and he just lasted into the next Ice Age. He lived with mammoths and other fauna of a cold period in this later time.

After the second Ice Age and glacial advance, which seems to have halted the development of this first man, there came the men who made the first clearly-

defined and shaped implements known as Chellean and Acheulean, the implements of river gravels. Man then lived in camps on river banks in a tolerable climate. This period was of immense duration and man had as his neighbours the elephant, rhinoceros and other animals of a warmer climate.

The third and fourth Ice Ages drove him to live in caves. This Cave period was of relatively short duration compared with the vast period when man roamed the river banks. But the climate was colder than in the river-bank period: man lived in steppe-land and tundra, and learned to domesticate the reindeer.

This brief note, as I am fully aware, is a wholly inadequate summary of a vast problem and an immense age of time. But there is no alternative between unsatisfactory brevity and devastating prolixity.

All prehistorians are extremely cautious in suggesting dates for the periods of the Quaternary or Pleistocene Age which I have mentioned, and almost silent when asked to give dates for man in the Tertiary Age. But a recent authoritative attempt goes far to aid them in getting at least some absolute chronology. (See F. E. Zeuner, 'The Pleistocene Chronology of Central Europe' in *The Geological Magazine* for August 1935.)

This writer's estimate is that the height of the last

Glacial period in Europe occurred about 18,000 years ago and that the middle of the period which came between the third and fourth glaciation was about 143,000 years ago. The middle date of the first Glacial period was 586,000 years ago. Since the earliest known human remains of the implement makers of the Eolithic period (exemplified by the Piltdown and Heidelberg skulls) date back to the close of this first Glacial Age we can assign a rough half-million years to the oldest certain activities of man.

At the other end of the Glacial periods in western and north-central Europe comes the latest Palaeolithic Age. This developed soon after the close of the last glaciation and was the age of cave-men, reindeer-domestication and rock-shelters. It covered a relatively insignificant period of time starting about 18,000 years ago and ending about 8,000 years ago. There followed the dim and retrogressive age known as Epipalaeolithic, which lasted a mere 3,000 years more and then merged into the Neolithic about 3000 B.C. (See Kendrick and Hawkes, *Archaeology in England and Wales,* p. 46.)

Elsewhere, in the Middle East and Mediterranean, the Neolithic Age started several thousand years earlier. Civilisation with a full knowledge of copper and some other metals was fully established in Sumer at

a time when in northern and western Europe development was almost at a standstill.

5. The Worora of Australia still paint in their caves and maintain existing cave-paintings in good condition. Some of the pictures are of totems of various tribal sections, and the paintings are inherited by boys and girls from their fathers as heirlooms. The pictures are periodically repainted, for the Worora believe that as long as an animal or plant has its picture in the cave the species will continue to flourish and increase in the district.

The fact that the Worora repaint their pictures from time to time is important. The same repainting is seen in Palaeolithic cave-paintings. Several redrawings and repaintings may occur in one picture. Indeed, the percentage of repainted pictures is very high.

Although Palaeolithic cave-paintings differ in character and type from the Australian, yet the Worora are still in the Palaeolithic stage of development. It is thus possible to explain the Palaeolithic paintings on the same grounds, as a rough catalogue of those animals which the hunters wished to continue and increase. No doubt instruction of the young by illustration, and the principle that, once you paint the picture or write the name of your opponent he is yours, also

contributed. But the idea that the paintings were all done solely to the order of a magician seems to me improbable. Ultimately it was the artist who counted, and it is the artist whom we are considering, for his paintings were deliberately made as beautiful as possible. That was a contribution to progress more impressive than any other aspect of these paintings.

6. A case can be made out for the existence of a rudimentary form of writing in late Palaeolithic times. In the caves of Niaux, on a part of the walls far from what might be called the 'picture gallery' are groups of signs which seem to have a symbolic value. In one case the figure of a dead bison is accompanied by symbols which appear to refer to it. From La Crozo de Gentillo comes a rod of reindeer horn on which are cut signs which may indicate the number or description of victims of a hunter.

But this prototype of writing came to nothing. It was never developed further, and seems to have perished during Epipalaeolithic times.

A second attempt seems to have occurred during the Eneolithic period in Spain (the age of copper). Here crude symbolic paintings occur in large numbers on rocky outcrops in the open air, often at the meeting-point of roadways and paths. The symbols, which are

similar in type and development to those of Niaux, but of course, much later, seem to have the intention of indicating to hunters and travellers the characteristics of the district. Other groups of signs seem to belong to ceremonials; they may represent, as it were, the marriage or burial service procedure at a given place. You went to that place and all that you had to do was to follow the instructions indicated by the symbols permanently painted on the rock. So permanent, indeed, were these paintings that they have survived in the open air the onset of weather and mankind from about 5000 B.C. (See the Abbé Breuil, *Les peintures Rupestres Schematiques de la Peninsula Iberique,* Vols. III and IV, 1933-5.) No trace of any such symbols in the Neolithic Age has been recorded, and no one has yet suggested that there was even a rudimentary Neolithic mode of writing.

7. The so-called Capsian culture of the late Palaeolithic and Epipalaeolithic Age has left us many rock-paintings which show mortal combat among men in which bows and arrows are used. Other paintings show bows and arrows being used against animals. It seems certain that the bow and arrow was an invention of this people and this age. Two different kinds of bow seem to have been known. The bow and arrow repre-

sents the first long-distance killing weapon that employed artificially created velocity greater than that produced by the human muscles. These decadent tribes invented an instrument which is the direct prototype of all shooting instruments. That it was at once turned against other men gives an indication of the age of retrogression in which they lived and which they helped to create. In the previous period, that of the finest cave-paintings and sculptures, there is no known instance of humans killing other humans with hand-axes or other implements of the Palaeolithic types. This is, of course, negative argument, and, as such, not final. But had mortal combat among men been prevalent in the Stone Age from Chellean to Magdalenian or Mousterian times, that is to say, from the remotest period of manufacture of fine stone axes to the latest period of fine flake-cutting, when knives and spear-heads of great elegance and complexity were made, we should surely by now have found among the immense amount of evidence available, instances of intertribal or internecine fighting. In fact we do not. The few representations of the human figure are concerned either with magic or with function.

8. The general attribution of the development of civilisation to the Mesopotamian and Egyptian regions

by archaeologists (with perhaps priority given to Sumer) is approximately confirmed by the conclusions produced by another science. Nothing is more valuable than the convergence of scientific conclusions derived by different sciences, on to one general result. Plant genetics gives us clues to the origin of agriculture, and so to the first great stride in progress. There are two distinct groups of wheat which can be hybridised only with difficulty. Each can be traced in its origin to a definite centre. One centre is in Abyssinia, and the other in or near southeastern Afghanistan. The first centre led to the growth of agriculture in the Nile valley, the second to that in the Indus and Euphrates plains. Many other cultivated plants also seem to have originated in these two areas of dispersal. Rye, carrots, turnips, various beans, lentils, flax, and cotton, all seem to derive from Afghanistan. Much of the research on these lines has been carried out by Soviet scientists in Russia, notably by Professor Vaviloff. Agriculture seems to have originated in the mountains and later to have reached the plains. The mountain origin of the Sumerians is now almost universally accepted by archaeologists.

For a general discussion of the facts, see J. B. S. Haldane, *The Inequality of Man,* p. 48.

9. In various places in ancient times animals were domesticated which now exist only in the wild state. The Sumerians domesticated the wild ass and the Egyptians the antelope. Probably the oldest domesticated animal after the dog is the reindeer. Its domestication has made possible a system of life on the Arctic circle which could not otherwise persist. There is some reason for thinking that the Eskimaux are the direct descendants of Palaeolithic Magdalenian man, who appears to have been the first to domesticate the reindeer. The Eskimaux, accustomed to a glacial or subglacial age, retired northwards with the ice as the last glacial movement ended in the withdrawal of the ice-sheet to its present position. There they were able to continue the mode of life to which they had been accustomed. Elsewhere man accommodated himself to warmer conditions. The Eskimo has thus a claim (not yet completely established) to be the only direct survivor of the type of man who lived at the close of the Cave period. The domestication of the horse, wherever it may have occurred, must have been a formidable enterprise. The wild horse known as the Przewalski Horse, which still survives in the Gobi desert and is the type which was first domesticated, is remarkably unmanageable and savage. The only other species of

primitive horse is that known as the Tarpan, found in South Russia.

On the whole there has been a decrease in the number of domesticated species since the Bronze Age. It is strange that so few experiments in the domestication of animals should have taken place since. Perhaps the elephant is the only new addition to the list. Against this must be set the loss of the buck and antelope which were domesticated in ancient Egypt.

10. The current cult of patriarchal methods and of an official patriarchal system in Germany seems to me to be due to the following causes and to arise from the following conditions. Germany, the most efficient military nation in the world, lost the Great War on the field of battle. Italy, after a notorious defeat at Adowa in a previous generation, capped her reputation for deficiency of military qualities by the most resounding collapse in military history—the retreat from Caporetto, where 600,000 soldiers ran away without fighting.

Both countries felt that something was required to atone for the reputation for military failure which Germany gave herself and which the rest of the world gave Italy. For no one doubted the bravery of the Germans except themselves, and no one at all credited that of Italians. Something, therefore, had to be done.

The password was decided on: it was to be 'Virility'. It was agreed in both countries to make masculinity into a cult, put the male into the forefront, and depress the female to her proper function of home-keeping and child-bearing. By the emphasis on male qualities it was hoped that the Germans in the next war might become more warlike, and Italians brave.

But the theory that the cult of the male will make more and better soldiers is based on an assumption which has yet to be proved. There is no necessary connection between prowess in the bed and prowess on the battlefield. The History of Heroism is starred with the names of misogynists—one thinks of T. E. Lawrence or Kitchener or Clemenceau. As far as my own experience went during the War, most of the more evident philogynists were usually to be found far from the front line, while the most astounding bravery was often displayed by men who, in normal circumstances, one would describe as effeminate.

Once the cult of the male was fully established in Germany and Italy, it then became essential to look round for someone to conquer, someone whose defeat could be considered (privately) as a foregone conclusion. So the Germans selected the Jews and the Italians selected the Abyssinians, against whom the

masculine efficiency of rubber truncheons and mustard gas respectively was bound, in the end, to succeed.

The assumption that virility and bravery are concomitant is, of course, ridiculous; but it serves to cheer and encourage two peoples whose *amour propre* had been darkly tarnished.

If we only play at Red Indians often enough, we shall no doubt all feel stronger and more masculine. If we sing in the dark we all begin to feel braver. A strange creed. Its authors forget that wars are in the end won less by 'guts' than by intelligence.

11. The existence of rollers is presupposed by the erection of the enormous megaliths of Avebury and Stonehenge, and by their transport from the place where they were removed from their matrix to the spot where they were put up. Such enormous stones could have been moved and lifted only by means of rollers made of tree trunks, employed in conjunction with ramps of earth. Once these rollers were so used, the conception of the wheel was evident to the discerning and inventive eye. But it is doubtful that any such inventor was born either at Avebury or at Stonehenge, for there is no evidence to show that the wheel developed in consequence of these engineering feats

in Britain. At present we must give the Sumerians the credit of having made the invention.

The method of making a perfect circle was, of course, well-known in the early Bronze Age in Britain. Circular barrows for the dead were first described by means of a rope attached to a central stake, the end of the rope, probably attached to a wooden pin, delineating the circle on a flat area. Anyone who looks at a barrow of circular shape can see that it is a perfect circle. Air photographs make this quite clear. (See Keiller and Crawford, *Wessex from the Air.*)

That no Bronze-Age Briton had the intelligence to apply his knowledge of rollers and circle-making to create the wheel is, no doubt, due to our national stupidity. The oriental Sumerians, on the other hand, who had no native-growing trees and no rocks, and built no Aveburys or Stonehenges, were the first to evolve the wheel, by virtue of their extreme intelligence, from some smaller and humbler hint. It is a trifle humiliating to think that with so many clues before his eyes the Briton failed to solve the problem and remained wheelless. As far as present knowledge goes, the wheel was not in use in Britain until Celtic times, on the very doorstep of history. And it reached the Celts from the East.

12. The inscription is published by Vincentius Arangio-Ruiz and Alexander Olivieri as No. 1 of the Tabulae Heracleenses in *Inscriptiones Graecae Siciliae et infimae Italial ad jus pertinentes.* Milan 1925. The tablets on which these legal ordinances of Heracleia are preserved are two in number and are of bronze. They were found in the year 1732, in a torrent bed between the rivers which bore the ancient names of Aciris and Siris, and are in almost perfect preservation.

One of its clauses concerns the growing of olive trees by citizens. The trees are to be planted and grown under supervision; a fixed number must grow in a fixed area; if they are not grown according to the official specification, the tenant, who holds his land on lease from the community, shall pay ten silver pieces for each tree which contravenes the ordinance. Similarly the cutting into logs of any trees is strictly controlled. If a tenant dies his harvest goes to the state, if he be intestate. If a tenant's property is damaged by action in warfare, his damages are assessed by the community.

In this long and detailed document, one of the most revealing of internal civic organisation in Greece, the citizen is responsible to his community for the conduct of the property he owns or leases.

13. That Mycenaean life was a somewhat barbaric version of Minoan life is proved by the fact that Mycenaeans allowed food to accumulate on the floors of their houses while the Minoans lived a scrupulously clean existence. (See K. F. Vickery: *Food in Early Greece,* University of Illinois, 1936, p. 23), where the author states 'It scarcely seems credible that the Mycenaeans could have been Cretans and not half-civilised barbarians if the accumulations in their palaces did really originate as they seem to have done.' One must always remember that the accumulation of food debris in a given building may be explicable on other grounds. But it looks as if the Mycenaeans lived the truly Homeric life. Certainly the Trojans let their house-floors grow up from the accumulated debris of countless meals. [See Blegen: *American Journal of Archaeology* (Excavations at Troy, 1935).]

14. Mr. Compton Mackenzie, in his wholly admirable incursion into ancient history, *Marathon and Salamis* (1934), remarks sagely on p. 155: 'With hardly an exception the leaders of the Hellenic resistance to Persia reveal the worst of human nature. They are revengeful, ambitious, greedy, jealous, vain, covetous, selfish, false and treacherous. Not one of them, in regard to the finer qualities of man, is worthy of being

matched against Darius, unless it might be Leonidas, of whom, except for that superlative act of self-abnegation, we know nothing.' We admire them because they are more like ourselves and less like the paragon Darius. Yet the fact that Darius, even in the account of Herodotus, clearly had all the virtues that a man can have as a ruler, shows that Persian civilisation could at least contribute to the advancement of mankind the conception of the ruler who was all-powerful because he was just. Yet beyond that one conception and a capacity for making roads and governing provinces, Persia gave nothing to the world, while the Greeks, individually little to be admired, conceived almost all the great conceptions of spiritual and intellectual advancement that the world has seen. The history of Persia is the tragedy of a country which wanted to be the most civilised in the world and did not know how to be; Greece discovered how to be, but the Greeks never combined among themselves adequately enough to make their conceptions a universal reality: they just did not want, except on rare occasions, to be the most civilised country in the world.

15. Since the text to which this note applies was written, excavations on a Roman Villa near Oxford have provided almost literal illustration of my words.

The villa, says its excavator, "was neither sacked nor burnt but was gradually allowed to fall into decay." During this process people camped within the walls, lighting their fires on the mortar pavement of Room 2. We may, perhaps, envisage a long period when the villa continued to function as an economic unit. The house, no longer inhabited, would serve as a temporary shelter for the landowner or his agent, who came to collect the rent in kind paid by the *coloni* on their farms.

Clearly the landlord abandoned his property and went elsewhere where it was safer, but he drew an income from it just as long as he was able. That was not long.

See *Oxoniensia* Vol. I. 1936. The Roman Villa at Ditchley, Oxon. p. 69.

16. The Byzantine Empire of the time of Justinian, about 560 B.C., covered an enormous area, extending from southern Spain on the west to Syria and the Caucasus on the east, from the Alps and Danube on the north to the upper waters of the Nile on the south. But it was essentially an empire held together by sea-connections, and it consisted roughly of 80 per cent of the total shoreline of the Mediterranean. In other words, it was a continuance of civilisation in exactly that area where civilisation had previously experi-

mented. Egypt, the site of the old Hittite Empire in Asia Minor, Greece and Italy, were not Byzantine. The vast adventure of the Roman Empire had shrunk back to its essential core. Gaul, most of Spain, all Roman Germany and, naturally, Britain, were once more at the mercy of barbarism. Even the provinces of the Byzantine Empire now welded together were largely barbarous. For many centuries after A.D. 560 neither Italy, Spain, the African coast, North Greece and Asia Minor, nor even Egypt could be said to have maintained the level of civilisation reached in Roman times. Most of these regions were slowly slipping back into barbarism. It was in Byzantium itself that civilisation maintained its strength and even increased.

This unequal balance between a highly organised centre and a loosely-held empire, resulted in a steady shrinkage. By A.D. 800 the bulk of the outlying provinces had already broken off. Only Asia Minor, parts of Greece and the Balkans and Sicily and the Greek islands were held against the Slav migrations. By 1180, the time of Manuel Comenus, the Byzantine Empire had reached a stage when it was tenable and no more. It then extended over the Balkans up to the Danube, and over Asia Minor and the islands, with a salient pushed towards Asia in the shape of the Trapezuntine

Kingdom. This was the last phase of the great Romano-Greek experiment in imperial organisation. Rome and her empire had shrunk back to the old sphere once outlined by the Minoan-Mycenaean civilisation. The areas referred to are shown on the map in this book.

17. The Byzantine army deserves our admiration perhaps more than any other army at any age. For it was organised on a basis of acute intelligence. Numbering at the most 120,000 men (a mere dozen divisions by modern standards) it yet held firmly an Empire extending from Syria to the Straits of Gibraltar. It was employed on the assumption that the best use was to be made of its units. It was an expensive army in organisation and equipment, and a perfect weapon. As such it was to be used with the maximum caution. Every Byzantine military book emphasises the stupidity of rashness. Stratagems and tricks of all sorts were to be employed for the defeat of the enemy. Every attempt must be made to bring demoralisation into the enemy's forces without actual recourse to force. Then when the moment came the army struck. 'The real strength of the Byzantines,' writes Stephen Runciman (*Byzantine Civilisation,* 1933, p. 144) 'lay in the intelligence with which they faced their various enemies. They made it their business to learn each opponent's

particular methods of warfare and the best way to counter them. Thus the Franks were the victims of their own rashness: they could be led on into ambushes. Their commissariat was bad and hunger tempted them to desert. They were insubordinate to their commanders and they were corrupt. . . . The Turks were, on the other hand, cunning themselves and consisted of hordes of light horsemen. The Byzantine general should, after having guarded against ambushes, close in battle as quickly as possible. His heavy horsemen could ride them down and they could not break his infantry lines. The Slavs, light foot-soldiers, were dangerous only in difficult hill-country. In the plains they were too badly armed and too undisciplined to stand up against Imperial troops. The Saracens remained their most important enemies. They could amass enormous armies, they moved with great speed and they had made a certain study of the art of war. But they remained somewhat disorganised and their morale was not good in defeat. . . . As man to man, their cavalrymen were no match for the Byzantine; and so a pitched battle need not be feared unless the numbers were disproportionate.' Every sort of device and invention for siege-work was encouraged. Greek fire was used mainly by the Navy and only by the army

to repel besiegers. The cavalry were the strength of the Byzantine army. They wore steel caps and mail shirts with linen or woollen cloaks to put on over their armour according to the weather. They were armed with a sword, a dagger, a bow and a lance.

Most of this information comes from the tactical handbook of the Emperor Leo VI.

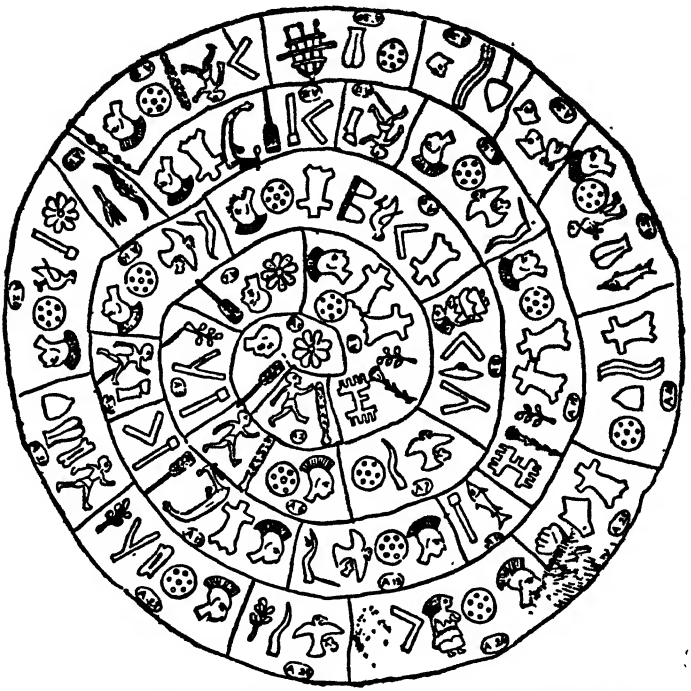
Nowhere do we read or hear of the relatively modern theory that the maximum amount of force produced at the most appropriate place will defeat the enemy. This is one of the less intellectual conceptions of Napoleonic warfare. Only once did it succeed in the Great War, and that was on the occasion of the German break-through of March, 1918. Even so it was the immensity of the force employed that showed how unworkable the theory is. The forces used were so large that they were unusable in the space and time available to complete the victory. Loos, the Somme and Paschendael, proved the theory wrong on three successive occasions, and yet neither Germans nor Allies could perceive it. The Byzantines discovered that a smaller force can defeat a larger by the maximum employment of the intelligence. Their discovery has since been lost.

18. It is a melancholy reflection on the decline of civilisation after the fall of the Roman Empire, and

on the long efforts needed to get back anywhere near the Roman level, that the great system of Roman roads in Britain went completely out of use after A.D. 500. The metalled highways sank under the surface and became mere grass-grown tracks. Only one small fragment of road was in use in Saxon times—the highway from London to Canterbury. The rest were forgotten and remained forgotten. The curious reader should consult the Ordnance Survey maps of Britain in the Roman period and Britain in the Dark Ages, completed in the last few years. On the first the Roman road system is clear and definite. On the second it has vanished and the Saxons have reverted mainly to the ridgeways and downland tracks in use before the Romans occupied the land. Through Saxon and Norman times and throughout the Middle Ages men passed from place to place on rough tracks and evil muddy lanes. In winter down to as late as the seventeenth and eighteenth centuries traffic was limited to the larger ways, and intercourse between communities was restricted. Only in recent years can we be said to have got back to the Roman standard of road-building.

19. It often happens that an invention is made without the inventor realising its importance or possibilities. The art of printing was in fact invented by hazard

about 2000 B.C. by some unknown person who fabricated that strange unique object known as the 'Phaestos Disk'. This disk is made of clay some seven and a half



THE PHAESTOS DISK: THE EARLIEST EXAMPLE OF PRINTING

inches in diameter and one inch in thickness. On its two faces are inscriptions, in each case in one continuous line, arranged as a spiral so as to fit into the

disk. The inscription is made by means of impressing certain signs on to the wet clay of the disk. Each sign is impressed by a matrix, probably of ivory or stone, which bore in intaglio the required design. In all there were forty-five of these movable type employed to make the inscription. Words are separated by vertical incised lines. No other instance of the signs so used has been found and the text of the double inscription cannot even be transliterated. It is thought that it is a dedication by some alien person in a Cretan sanctuary. The origin of the dedicator, from certain hints given by the character of the signs, may be Asiatic.

The fabricator of the disk certainly invented the art of printing and possessed a fount of type. But he does not seem to have realised the possibilities of his invention. Nor did anyone else.

20. Modern revolutionaries aim always at first seizing the Central Wireless distributing agency. In the attempted Nazi revolution in Austria, when Dollfuss was assassinated, one detachment of conspirators seized the Vienna broadcasting centre and broadcast throughout Austria the statement that Dr. Rintelen had been made chancellor and that a Nazi regime was in power, although in fact neither was an accomplished fact. In Spain the rebel military forces in 1936, unable to seize

the central broadcasting agency in Madrid, set up rival organisations of their own in Burgos and Seville. The centralisation of broadcasting in London into one building makes such an attempt particularly easy, just as it makes the dislocation of the whole organisation by destruction equally simple, whether by internal attack or by external raid. During the General Strike of 1926 the Government, if it had been more unscrupulous, could have spread much false information by virtue of its control of the only means of general communication left as a consequence of the strike.

21. Priests and organised religions rapidly monopolised the invention of writing in order to give themselves a weapon for defence and survival. The Sumerian invention of cuneiform was soon taken over by the temple authorities. In Greece and Rome, fortunately for civilisation, this did not happen, and so literature was born. But after the fall of the Roman world the priests salved the invention from the general ruin around them and so got hold of it. When conditions of life were stabilised again they did not loosen their hold. Faced with the subsidiary, but revolutionary, invention of printing they were beaten at last. Even so, the Roman Church has valiantly striven to arrest the course of progress and by means of its Index has made

a gesture in the grand manner of ancient times to display its control over the printed word. The Church of England has made a faint-hearted attempt in the same direction. The 6th of the Thirty-Nine Articles reads as follows:

> Holy Scripture containeth all things necessary to salvation: so that whatsoever is not read therein, nor may be proved thereby, is not to be required of any man, that it should be believed as an article of Faith, or be thought requisite or necessary to salvation.

It has not yet been expunged from the prayerbook and so is presumably still valid. But on the whole it might well be said that neither of the two great divisions of Christianity, the Roman Church and the Protestant Churches, has any real effect on the control of publication. The intelligent Catholic uses his Index as his library list and the unintelligent Catholic is not likely either to read or to understand the indexed books. The Protestant protests as and how he wills.

22. The following is taken from the magazine *Country Life*, dated December 12, 1936:

> PROTECTION
>
> The illustration accompanying this note shows one of the air-raid shelters designed by Messrs. British Air Raid Shelters, Limited, 110, Sloane Street, S.W. 1, who specialise

in this kind of work and construction. This has been carried out in a garden, but the firm also makes cellars into bomb- and gas-proof shelters. Such a one as that in the illustration contains reserve supplies of water, electricity, conditioned air, sleeping bunks, food stores, etc., and comprises two hemispherical shelters joined together by a communicating chamber.

23. The retrogressive tendency of Fascism in education is so clear as to need little demonstration. In Germany a decree has (September 1936) been issued confirming the period of compulsory labour at six months, but increasing the numbers called up for service. The youth of the country have now to serve two years in the army and six months in labour camps. Thus a schoolboy has a long interval between his school education and his university or technical education. Therefore, to meet this difficulty, the school course is now being cut down by a year and a similar curtailment of the university course is in contemplation. In this way does Fascism tend to reduce the general intelligence of a nation, which is, of course, exactly what the dictator wants. To dictate over a country of intelligent people would soon mean the end of dictatorship. That Oswald Mosley is still a figure of fun and not a menace in England is due to the fact that, even with our low standard of general education, there is still enough

general intelligence to detect his absurdity. The deliberate attempts to delimit and degrade education in Fascist lands is an aspect of their system which does not receive the attention that it deserves. German learning and scholarship will soon become a memory.

SET IN LINOTYPE BASKERVILLE
FORMAT BY A. W. RUSHMORE
MANUFACTURED BY THE HADDON CRAFTSMEN
PUBLISHED BY HARPER & BROTHERS
NEW YORK AND LONDON